

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION


MEMORANDUM


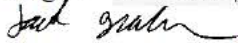
DATE: 27-SEP-2023

SUBJECT: **Chlorothalonil.** Revised Acute and Chronic Aggregate Dietary (Food and Drinking Water) Exposure and Risk Assessments for the Registration Review Risk Assessment.

PC Code: 081901
Decision No.: 579015
Petition No.: NA
Risk Assessment Type: Dietary
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Registration No.: NA
Regulatory Actions: Registration Review
Case No.: 0097
CAS No.: 1897-45-6
40 CFR: §180.275

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The conclusions conveyed in this assessment were developed in full compliance with *EPA Scientific Integrity Policy for Transparent and Objective Science*, and EPA Scientific Integrity Program's *Approaches for Expressing and Resolving Differing Scientific Opinions*. The full text of *EPA Scientific Integrity Policy for Transparent and Objective Science*, as updated and approved by the Scientific Integrity Committee and EPA Science Advisor can be found here: https://www.epa.gov/sites/default/files/2014-02/documents/scientific_integrity_policy_2012.pdf. The full text of the EPA Scientific Integrity Program's *Approaches for Expressing and Resolving Differing Scientific Opinions* can be found here: <https://www.epa.gov/scientific-integrity/approaches-expressing-and-resolving-differing-scientific-opinions>.

Executive Summary

Acute and chronic aggregate dietary (food and drinking water) exposure and risk assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID) Version 4.02. This software uses 2005-2010 food consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). The analysis was performed in support of the draft human health risk assessment for Registration Review of chlorothalonil. This analysis has been reviewed by two peer reviewers of the DESAC, per the DESAC Standard Operating Procedure (SOP, 09-JUN-2021). Acute and chronic dietary assessments were conducted for chlorothalonil, and an acute dietary assessment was conducted for chlorothalonil metabolite SDS-3701 (4-hydroxy chlorothalonil).

Acute (Food and Drinking Water) Exposure Results and Characterization for Chlorothalonil

An unrefined acute dietary (food and drinking water) exposure and risk assessment was conducted for the population subgroup, females 13-49, assuming 100 percent crop treated (PCT), HED default processing factors, and tolerance-level residues for all food commodities. Drinking water was incorporated directly into the dietary assessment and used the Tier 2 highest daily value for groundwater concentrations updated with 2-meter subsurface degradation. The resulting acute dietary (food plus drinking water) risk estimate is not of concern to HED (<100% of the acute population-adjusted dose (aPAD)) at the 95th percentile of the exposure. The acute dietary (food plus drinking water) risk for females 13 to 49 years old is 11% of the aPAD. No appropriate toxicological effect attributable to a single dose was observed for the U.S. population or any other population subgroup except females 13-49.

Chronic Dietary (Food and Drinking Water) Exposure Results and Characterization for Chlorothalonil

A partially refined chronic dietary (food and drinking water) exposure and risk assessment was conducted using the U.S. Department of Agriculture (USDA) Pesticide Data Program (PDP) monitoring data, screening-level usage analysis (SLUA) PCT estimates, HED default processing factors, and tolerance-level residues for some commodities. Drinking water was incorporated directly into the dietary assessment and used the post-breakthrough average for groundwater concentrations updated with 2-meter subsurface degradation. All chronic risk estimates are above HED's level of concern (>100% chronic population-adjusted dose (cPAD)). The chronic dietary risk for the highest exposed population subgroup, all infants (<1 year old), is 520% of the cPAD. Residues in drinking water contributed >99% of the chronic dietary exposure and risk for all infants <1 year old.

Cancer Dietary (Food and Drinking Water) Exposure Results and Characterization for Chlorothalonil

Chlorothalonil was classified as "likely to be a human carcinogen by all routes of exposure;" however, the Science Advisory Panel (SAP) decision from 30-JUN-1998 supports the use of a threshold approach for the chlorothalonil risk assessment. Cancer risk concerns due to long-term

consumption of chlorothalonil residues are adequately addressed by the chronic risk analysis using the cPAD. The point of departure used in chronic dietary assessment is protective of the doses where tumors were observed. Therefore, quantification of cancer risk is not warranted.

Dietary (Food and Drinking Water) Exposure Results and Characterization for Chlorothalonil Metabolite SDS-3701 (4-Hydroxy Chlorothalonil)

During the re-evaluation of previously submitted and reviewed data, HED discovered that the SDS-3701 metabolite appears to be much more toxic than chlorothalonil. As a result, an acute dietary endpoint for SDS-3701 that is separate and apart from the parent chlorothalonil endpoint has been selected for females 13-49 years of age only. A partially refined acute dietary (food and drinking water) exposure and risk assessment was conducted assuming 100 PCT, HED default processing factors, maximum field trial residues for some crops, and tolerance-level residues for most food commodities (see Attachment 8). Drinking water was incorporated directly into the dietary assessment and used the Tier 2 highest daily value for groundwater concentrations updated with 2-meter subsurface degradation. The resulting acute dietary (food plus drinking water) risk estimate is above HED's level of concern (>100% aPAD) at the 95th percentile of exposure. The acute dietary (food plus drinking water) risk for the population subgroup females 13 to 49 years old is 130% of the aPAD. Based on the critical commodity contribution analysis, the estimated acute dietary risk from drinking water alone is 120% of the aPAD. No appropriate toxicological effect attributable to a single dose was observed for the U.S. population or any other population subgroup except females 13-49. HED also has concluded that the current chronic dietary POD for chlorothalonil is protective of chronic toxicity from SDS-3701; therefore, a separate chronic dietary assessment was not required.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose that HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population-adjusted dose (PAD). The PAD is equivalent to the point of departure (POD) divided by all applicable uncertainty factors, including the FQPA Safety Factor.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References that discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2007-0780-0001>; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for chlorothalonil was conducted by G. Kramer (D460288, 18-DEC-2020).

II. Residue Information

Residues of Concern: The qualitative nature of the residue in plants is adequately understood based on acceptable metabolism studies with carrots, celery, lettuce, snap beans, and tomatoes. The residues of concern for risk assessment tolerance enforcement are chlorothalonil and its 4-hydroxy metabolite, SDS-3701. The qualitative nature of the residue in livestock is adequately understood. The residue of concern in meat and milk is 4-hydroxy chlorothalonil. Chlorothalonil *per se* has been shown to be so unstable in ruminant tissues that it is impractical to establish tolerances that include the parent.

| Table 1. Residues for Tolerance Expression and Risk Assessment. | | |
|--|--|---|
| Matrix | Residues Included for Risk Assessment | Residues Included in the Tolerance Expression |
| Plants | Chlorothalonil, 4-Hydroxy Chlorothalonil | Chlorothalonil, 4-Hydroxy Chlorothalonil |
| Livestock- Ruminants | Chlorothalonil, 4-Hydroxy Chlorothalonil | 4-Hydroxy Chlorothalonil |
| Livestock- Poultry | None | Not Applicable |
| Rotational Crops | None | Not Applicable |
| Drinking Water | Chlorothalonil, R613636, SDS-3701 (4-Hydroxy Chlorothalonil), R613841, R613842, R417888, R611966, SYN507900, PD 3, PD 4, R613911, R613801, and SYN549430 | Not Applicable |

R613636 = 2,3,4,6-tetrachloro-5-cyanobenzamide; SDS-3701 = 4-hydroxy-2,5,6-trichloro-1,3-benzenedicarbonitrile; R613841 = 4,6,7-trichloro-3-oxo-2,3-dihydrobenzo[d]isothiazole-5-carbonitrile; R613842 = 4,6,7-trichloro-3-oxo-2,3-dihydrobenzo[d]isothiazole-5-carbonitrile 1-oxide; R417888 = 2-carbamoyl-3,5,6-trichloro-4-cyanobenzenesulfonic acid; R611966 = 2,4,5-trichloro-3-cyano-benzamide; SYN507900 = 2,3,6-trichloro-5-cyano-4-hydroxybenzamide; PD 1 = 2-chloro-4-hydroxy-benzene-1,3-dicarbonitrile; PD 2 = 2,5-dichloro-4-hydroxy-benzene-1,3-dicarbonitrile; PD 3 = 4-chloro-2,5,6-trihydroxy-benzene-1,3-dicarbonitrile; PD 4 = 2,5-dichloro-4,6-dihydroxy-benzene-1,3-dicarbonitrile; R613911 = 2,5-dichloroisophthalonitrile; R613801 = 2,4,5-trichloroisophthalonitrile; and SYN549430 = 4,6,7-trichloro-3-hydroxybenzo[d]isoxazole-5-carbonitrile.

Established Tolerances: Permanent tolerances have been established for chlorothalonil and its 4-hydroxy metabolite as listed in 40 CFR §180.275. Chlorothalonil is registered for use on a number of agricultural commodities. The established tolerances for residues of chlorothalonil and its 4-hydroxy metabolite have been reevaluated for the purposes of Registration Review:

| Table 2. Summary of Tolerance Revisions for Chlorothalonil (40 CFR §180.275)¹. | | | |
|--|-----------------------------------|-----------------------------------|---|
| Commodity/ Correct Commodity Definition | Established Tolerance (ppm) | Recommended Tolerance (ppm) | Comments |
| 40 CFR 180.275(a)(1) | | | |
| Apricot | 0.5 | 1.5 | Harmonization with Codex. |
| Almond, hulls | 1.0 | 1 | Corrected value to be consistent with OECD Rounding Class Practice. |
| Banana | - | 0.5 | Commodity term revision. |
| Banana (NMT 0.05 ppm in edible pulp) | 0.5 | remove | |
| Bean, snap, edible podded | - | 5 | Commodity term revision. |
| Bean, snap, succulent | 5 | remove | |
| Blueberry | 1.0 | 1 | Corrected value to be consistent with OECD Rounding Class Practice. |
| Broccoli, chinese | - | 5 | Crop group conversion/revision. ^{2,3} |
| Brussels sprouts | - | 6 | Harmonization with Codex. |
| Cacao, dried bean | - | 0.05 | Commodity term revision. |

| Table 2. Summary of Tolerance Revisions for Chlorothalonil (40 CFR §180.275)¹. | | | |
|--|--|--|--|
| Commodity/ Correct Commodity Definition | Established Tolerance (ppm) | Recommended Tolerance (ppm) | Comments |
| Cocoa bean, dried bean | 0.05 | remove | |
| Celery | 15 | 20 ⁴ | Harmonization with Codex. |
| Coffee, green bean | - | 0.2 | Commodity term revision. Corrected value to be consistent with OECD Rounding Class Practice. |
| Coffee, bean, green | 0.20 | remove | |
| Corn, sweet, forage | - | 65 | Recommended for previously ⁵ . |
| Corn, sweet, stover | - | 50 | |
| Cranberry | 5.0 | 5 | Corrected values to be consistent with OECD Rounding Class Practice. |
| Fungi, edible, group 21 | - | 1 | Commodity term revision. Corrected values to be consistent with OECD Rounding Class Practice. |
| Mushroom | 1.0 | remove | |
| Ginseng | 4.0 | 4 | Corrected values to be consistent with OECD Rounding Class Practice. |
| Horseradish | 4.0 | 4 | |
| Kohlrabi | - | 5 | Crop group conversion/revision. ^{2,3} |
| Lentil, dry seed | - | 0.1 | Commodity term revision. Corrected value to be consistent with OECD Rounding Class Practice. |
| Lentil | 0.10 | remove | |
| Mango | 1.0 | 1 | Corrected value to be consistent with OECD Rounding Class Practice. |
| Nectarine | 0.5 | remove | Covered by Peach (§180.1(g)) |
| Okra | 6.0 | remove | Member of Vegetable, fruiting, group 8-10 |
| Onion, bulb | 0.5 | 1.5 | Harmonization with Codex. |
| Onion, green | 5 | 10 | |
| Papaya | 15 | 20 | |
| Peanut, hay | - | 20 | Recommended for previously ⁵ . |
| Plum, prune, fresh | - | 0.2 | Commodity term revision. |
| Plum, prune | 0.2 | remove | |
| Potato | 0.1 | 0.3 ⁴ | Harmonization with Codex. |
| Rhubarb | 4.0 | 7 | |
| Soybean, seed | - | 0.2 | Commodity term revision. |
| Soybean | 0.2 | remove | |
| Starfruit | 3.0 | 3 | Corrected values to be consistent with OECD Rounding Class Practice. |
| Vegetable, cucurbit, group 9 | 5.0 | 5 | |
| Vegetable, fruiting, group 8-10, except tomato | - | 7 | Crop group conversion/revision. Harmonization with Codex. |
| Vegetable, fruiting, group 8, except tomato | 6.0 | remove | |
| Yam, true, tuber | - | 0.3 | Commodity term revision. Harmonization with Codex. |
| Yam, true | 0.10 | remove | |
| Vegetable, <i>brassica</i> head and stem, group 5-16, except Brussels sprouts | - | 5 | Corrected value to be consistent with OECD Rounding Class Practice. Crop group conversion/revision. ² |
| Brassica, head and stem, subgroup 5A | 5.0 | remove | |
| Vegetable, legume, pea, edible podded, subgroup 6-22B | - | 5 | Commodity term revision. |

| Table 2. Summary of Tolerance Revisions for Chlorothalonil (40 CFR §180.275) ¹ . | | | |
|---|-----------------------------------|-----------------------------------|---------------------------|
| Commodity/ Correct Commodity Definition | Established Tolerance (ppm) | Recommended Tolerance (ppm) | Comments |
| Pea, edible podded | 5 | remove | |
| Vegetable, legume, pulse, bean, dried shelled, except soybean, subgroup 6-22E | - | 0.1 | Commodity term revision. |
| Bean, dry, seed | 0.1 | remove | |
| 40 CFR 180.275(a)(2) | | | |
| Cattle, meat byproducts, except kidney | 0.05 | 0.2 | Harmonization with Codex. |
| Goat, meat byproducts, except kidney | 0.05 | 0.2 | |
| Hog, meat byproducts, except kidney | 0.05 | 0.2 | |
| Horse, meat byproducts, except kidney | 0.05 | 0.2 | |
| Sheep, meat byproducts, except kidney | 0.05 | 0.2 | |
| 40 CFR 180.275(c) Tolerances with regional registrations. | | | |
| Peppermint, fresh leaves | - | 2 | Commodity term revision. |
| Peppermint, tops | 2 | remove | |
| Persimmon, american | - | 1.5 | Commodity term revision. |
| Persimmon, black | - | 1.5 | |
| Persimmon, japanese | - | 1.5 | |
| Persimmon | 1.5 | remove | |
| Spearmint, fresh leaves | - | 2 | Commodity term revision. |
| Spearmint, tops | 2 | remove | |

¹ For complete list of established/recommended tolerances see the International Residue Limit Status Sheet in Appendix D of the draft human health risk assessment for Registration Review (D457661, G. Kramer *et al.*, 09-APR-2021).

² The recommended conversion of existing tolerance in/on crop subgroup 5A to crop group 5-16 (vegetable, *Brassica*, head and stem), kohlrabi, and Chinese broccoli are consistent with the document titled, "Attachment - Crop Group Conversion Plan for Existing Tolerances as a Result of Creation of New Crop Groups under Phase IV (4-16, 5-16, and 22)" dated 03-OCT-2015.

³ HED is recommending for individual tolerances at a level of 5 ppm for Broccoli, Chinese and Kohlrabi based on the currently established tolerance for these commodities as part of crop group 5A.

⁴ Syngenta has requested that the U.S. tolerance levels for these crops be maintained in order to facilitate trade with Canada (D463742, R. Loudon *et al.*, 27-SEP-2023).

⁵ The Revised HED Chapter of the Reregistration Eligibility Decision (RED) Document for Chlorothalonil, 07-JAN-1998.

OECD = Organization for Economic Cooperation and Development.

Food Residues: The unrefined acute assessment was conducted assuming tolerance-level residues for all food commodities. The partially refined chronic assessment was conducted using PDP monitoring data, and tolerance-level residues for some commodities (e.g., ginseng; onion, green; leek; Brussels sprouts; cabbage; cauliflower; soybean, seed; okra; pepper, nonbell; lychee; passionfruit; peanut; mint; and starfruit). The PDP Utility was used to create the DEEM chronic R08 file. The following modifications were made to the R08 file: 1) the PCT was changed to 100% for blended commodities which used PDP data; 2) HED default processing factors were added to Adjustment Factor 2; 3) tolerance-level residues were updated as recommended in Table 2; 4) tolerance-level residues were used for livestock commodities as the residue of concern in meat and milk is 4-hydroxy chlorothalonil, which is not determined by PDP; 5) conversion to a R10 file. See Attachments 3 and 7 for complete details. HED notes that the residues of concern in crops are chlorothalonil and its 4-hydroxy metabolite, while PDP monitoring data was reported for only chlorothalonil. HED has determined that the

chlorothalonil residues reported by PDP do not need to be adjusted for potential 4-hydroxy chlorothalonil because the field trial data for the crops in question showed that, when detected, 4-hydroxy chlorothalonil residues were generally far less than 5% of the chlorothalonil residue. Adjusting for 4-hydroxy chlorothalonil would thus not have a significant effect on the total residue value. In addition, residues in food contributed very little to the total dietary exposure and risk.

Processing Factors: The acute and chronic dietary exposure assessments assumed HED default processing factors.

Fish: The USDA Pesticide Data Program (PDP) monitored pesticide residues in catfish in 2008, 2009, and 2010 and salmon in 2013 and 2014. In general, pesticide residues would not be expected to be found in fish unless the pesticide bioaccumulates or has an aquatic use. To determine whether or not residues are present in fish, HED now routinely checks PDP monitoring data regardless of the pesticide's uses and physicochemical properties. PDP monitored chlorothalonil residues in 552 samples of catfish in 2008 only; however, none of the samples contained detectable residues of chlorothalonil. As a result, residues in fish were not included in the assessment. PDP also monitored pesticide residues in salmon in 2013 and 2014. However, PDP did not analyze the salmon samples for chlorothalonil. As a result, residues in fish were not included in the assessment.

III. Percent Crop Treated Information

A SLUA memorandum was provided by the Biological and Economic Analysis Division (BEAD) (Memo, R. Fovargue, 21-OCT-2020). The chronic analysis incorporated average PCT data for almonds (20%), apricots (10%), asparagus (40%), beans (snap, bush, pole, string; 25%), blueberries (10%), broccoli (5%), Brussels sprouts (15%), cantaloupes (15%), carrots (35%), cauliflower (2.5%), celery (70%), cherries (35%), cucumbers (70%), dry beans/peas (2.5%), eggplant (10%), garlic (5%), hazelnuts (30%), onions (50%), peaches (30%), peanuts (75%), peppers (20%), pistachios (1%), plums/prunes (35%), potatoes (70%), pumpkins (60%), soybeans (1%), squash (60%), sweet corn (5%), tomatoes (55%), and watermelons (65%). Please refer to Attachment 6 for the SLUA provided by BEAD.

As stated above, HED based the acute assessment on 100% crop treated assumptions for all commodities.

IV. Drinking Water Data

The drinking water assessment was provided by EFED (Memo; D463743, S. Lin & K. Stebbins, 27-SEP-2023). Chlorothalonil and several environmental transformation products are the residues of toxicological concern in drinking water and are analyzed through a total toxic residue (TTR) method. This modeling method assumes all residues of concern have similar physical, chemical, and partitioning characteristics and can be modeled using aquatic exposure models such as the Pesticide in Water Calculator (PWC) with a combination of parameters from parent or individual residues of concern. Degradates with an intact cyano group are residues of concern (see Table 1).

Model simulations for maximum label rates indicate that groundwater concentrations are expected to be higher than surface water. The highest EDWC results from ornamental uses. Groundwater concentrations updated with 2-meter subsurface degradation are estimated to be 1.556 ppm for the peak concentration and 1.370 ppm for the post-breakthrough concentration (Table 3). These EDWCs are derived using the Wisconsin central sands scenario and represent concentrations that may occur in vulnerable groundwater wells that could be used as source drinking water. However, these concentrations are not expected to occur across the landscape, but rather is specific to areas of the country. While ornamental production may not be expected to be as common in the central Wisconsin area as other areas of the country, ornamental production does occur across the entire country. As such, this scenario provides upper bound estimates based on the soil and weather conditions simulated.

Table 3. Estimated Concentrations of Chlorothalonil and Degradates of Concern in Ground Water Updated With 2-Meter Subsurface Degradation.

| Crop | Application ¹ | Max Yearly App. Rate (lb ai/A) | Scenario | Highest Daily Value (µg/L) | Post-Breakthrough Average (µg/L) |
|------------|--|--------------------------------|------------------|----------------------------|----------------------------------|
| Ornamental | 11 apps @ 3.08 lb ai/A, 1 app @ 2.1 lb ai/A 7-day MRI | 36 | WI Central Sands | 1556 | 1370 |

¹ Maximum application rates listed across all product labels, MRI = minimum retreatment interval.

The acute and chronic dietary assessments assumed EDWC values of 1.556 ppm and 1.370 ppm, respectively.

The drinking water models and their descriptions are available at the EPA internet site: <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/models-pesticide-risk-assessment>.

V. DEEM-FCID Program and Consumption Information

Chlorothalonil acute and chronic dietary exposure assessments were conducted using the DEEM-FCID, Version 4.02. This software uses 2005-2010 food consumption data from the USDA's NHANES/WWEIA. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g., apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups. Based on analysis of the consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50-99 years old.

For chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form to produce a residue intake estimate. The resulting residue intake estimate for each food/food form is summed with the residue intake estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent

of the cPAD. This procedure is performed for each population subgroup.

For an acute exposure assessment, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or “matched” in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for analyses performed at all levels of refinement. However, for deterministic assessments, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

VI. Toxicological Information

The toxicological endpoints as reevaluated in support of the draft human health risk assessment for Registration Review of chlorothalonil (Memo; D457661, G. Kramer *et al.*, 09-APR-2021) are summarized below in Table 4. During the evaluation of previously submitted and reviewed data, HED discovered that the SDS-3701 metabolite appears to be much more toxic than chlorothalonil (D463742, R. Loudon *et al.*, 27-SEP-2023). The toxicological endpoints for chlorothalonil metabolite SDS-3701 are discussed in Attachment 8.

| Table 4. Summary of Toxicological Doses and Endpoints for Chlorothalonil and SDS-3701 for Use in Dietary Human-Health Risk Assessments. | | | | |
|--|---|---|---|---|
| Exposure Scenario | POD | Uncertainty/FQPA Safety Factors | LOC for Risk Assessment | Study and Toxicological Effects |
| Chlorothalonil Acute Dietary (Females 13-49 years of age) | NOAEL = 100 mg/kg/day | UF _A = 10X UF _H = 10X UF _{FQPA} = 1X | Acute RfD = 1.0 mg/kg/day aPAD = 1.0 mg/kg/day | <u>Developmental rat</u> Developmental LOAEL = 400 mg/kg/day based on an increase in total resorptions (mostly early) per dam with a related increase in post-implantation loss. |
| SDS-3701 Acute Dietary (Females 13-49 years of age) | NOAEL = 5 mg/kg/day | UF _A = 10X UF _H = 10X FQPA SF = 1X | Acute RfD = 0.05 mg/kg/day aPAD = 0.05 mg/kg/day | <u>Rat Developmental (MRID 45331001)</u> Developmental LOAEL = 15 mg/kg/day based on increased early resorptions. |
| Chronic Dietary (All Populations) | NOAEL = 2 mg/kg/day | UF _A = 10X UF _H = 10X UF _{FQPA} = 1X | Chronic RfD = 0.02 mg/kg/day cPAD = 0.02 mg/kg/day | <u>Chronic tox/carc – rat</u> LOAEL = 4 mg/kg/day based on kidney effects consisting of epithelial hyperplasia in the renal proximal convoluted tubules of female rats |
| Cancer | Classification: “Likely” to be a human carcinogen by all routes of exposure (HED CPRC, 4th Meeting, 06-NOV-1997); however, the SAP decision (06-JUN-1998) supports the use of a threshold approach in risk assessment for chlorothalonil. | | | |

Point of departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. UF = uncertainty factor, UF_A = extrapolation from animal to human (interspecies), UF_H = potential variation in sensitivity among

members of the human population (intraspecies), UF_{FQPA} = FQPA Safety Factor, NOAEL = no-observed adverse-effect level, LOAEL = lowest-observed adverse-effect level, RfD = reference dose (a = acute, c = chronic), cPAD = chronic population-adjusted dose.

VII. Results/Discussion

An unrefined acute dietary (food and drinking water) exposure and risk assessment was conducted assuming 100 PCT, HED default processing factors, and tolerance-level residues for all food commodities. The resulting acute dietary (food plus drinking water) risk estimates are not of concern to HED (<100% of the aPAD) at the 95th percentile of the exposure. The acute dietary (food plus drinking water) risk for the females 13 to 49 years old is 11% of the aPAD (Table 5). For SDS-3701, the acute dietary (food plus drinking water) risk estimate is above HED's level of concern (>100% aPAD) at the 95th percentile of exposure (Table 6). The acute dietary (food plus drinking water) risk for the population subgroup females 13 to 49 years old is 130% of the aPAD. No appropriate toxicological effect attributable to a single dose was observed for the U.S. population or any other population subgroup except females 13-49.

A partially refined chronic dietary (food and drinking water) exposure and risk assessment was conducted using USDA PDP monitoring data, PCT estimates, HED default processing factors, and tolerance-level residues for some commodities. All chronic risk estimates are above HED's level of concern (>100% cPAD). The chronic dietary (food plus drinking water) risk estimate for the U.S. population is 150% of the cPAD (Table 5). The chronic dietary risk estimate for the highest exposed population subgroup, all infants (<1 year old), is 520% of the cPAD. The estimated chronic dietary risk from drinking water alone for all infants (<1 year old) is 520% of the cPAD. For all infants, drinking water contributed 99% of the chronic dietary exposure and risk; see Attachment 5. For SDS-3701, HED concluded that the current chronic dietary POD for chlorothalonil is protective of chronic toxicity; therefore, a separate chronic dietary assessment was not required.

Chlorothalonil was classified as "likely to be a human carcinogen by all routes of exposure"; however, the SAP decision from 30-JUN-1998 supports the use of a threshold approach for the chlorothalonil risk assessment. Cancer risk concerns due to long-term consumption of chlorothalonil residues are adequately addressed by the chronic risk analysis using the cPAD. The point of departure used in chronic dietary assessment is protective of the doses where tumors were observed. Therefore, quantification of cancer risk is not required.

| Table 5. Summary of Dietary (Food + Drinking Water) Exposure and Risk for Chlorothalonil. | | | | |
|--|------------------------------|--------|------------------------------|------------|
| Population Subgroup | Acute Dietary | | Chronic Dietary | |
| | Dietary Exposure (mg/kg/day) | % aPAD | Dietary Exposure (mg/kg/day) | % cPAD |
| General U.S. Population | N/A | N/A | 0.029010 | 150 |
| All Infants (<1 year old) | | | 0.104771 | 520 |
| Children 1-2 years old | | | 0.043247 | 220 |
| Children 3-5 years old | | | 0.033927 | 170 |
| Children 6-12 years old | | | 0.024852 | 120 |
| Youth 13-19 years old | | | 0.020503 | 100 |
| Adults 20-49 years old | | | 0.028543 | 140 |
| Adults 50-99 years old | | | 0.027856 | 140 |

| Table 5. Summary of Dietary (Food + Drinking Water) Exposure and Risk for Chlorothalonil. | | | | |
|--|------------------------------|-----------|------------------------------|--------|
| Population Subgroup | Acute Dietary | | Chronic Dietary | |
| | Dietary Exposure (mg/kg/day) | % aPAD | Dietary Exposure (mg/kg/day) | % cPAD |
| Females 13-49 years old | 0.107570 | 11 | 0.028046 | 140 |

The highest exposure/risk estimate for each duration is bolded.

| Table 6. Summary of Dietary (Food + Drinking Water) Exposure and Risk for SDS-3701. | | |
|--|------------------------------|--------|
| Population Subgroup | Acute Dietary | |
| | Dietary Exposure (mg/kg/day) | % aPAD |
| Females 13-49 years old | 0.062687 | 130 |

VIII. Characterization of Inputs/Outputs

The acute analysis assumed modeled drinking water estimates, tolerance-level residues, and 100 PCT. This analysis is very conservative and could be refined through the use of anticipated-residue estimates (ARs) for all commodities, PCT data for registered commodities, and/or empirical processing factors; however, refinement is not necessary at this time. The chronic analysis was conducted using USDA PDP monitoring data, PCT estimates, HED default processing factors, and tolerance-level residues for some commodities. This analysis is considered conservative and could be refined through the use of ARs for commodities not monitored by PDP, PCT data for all registered commodities, refined EDWCs, and/or empirical processing factors. Further food-related refinements were not considered because the majority of exposure is from drinking water.

IX. Conclusions

The acute dietary risk estimates for chlorothalonil do not exceed HED's level of concern for females 13 to 49 years. For SDS-3701, the acute dietary (food plus drinking water) risk estimate is above HED's level of concern (>100% aPAD) at the 95th percentile of exposure for the population subgroup females 13 to 49 years old (130% of the aPAD). No appropriate toxicological effect attributable to a single dose was observed for the U.S. population or any other population subgroup except females 13-49. All chronic risk estimates for chlorothalonil are above HED's level of concern (>100% cPAD). The chronic dietary risk estimate for the highest exposed population subgroup, all infants (<1 year old), is 520% of the cPAD. The estimated chronic dietary risk from drinking water alone for all infants (<1 year old) is 520% of the cPAD. Drinking water thus contributes 99% of the chronic dietary risk for all infants <1. Further food-related refinements were not considered because the majority of exposure is from drinking water. For SDS-3701, HED concluded that the current chronic dietary POD for chlorothalonil is protective of chronic toxicity; therefore, a separate chronic dietary assessment was not required. HED is confident that the assessments do not underestimate risk to the general U.S. population or any population subgroup.

IX. List of Attachments

- Attachment 1: DEEM-FCID Acute Food + Drinking Water Residue Input File.
- Attachment 2: DEEM-FCID Acute Dietary Analysis Results.
- Attachment 3: DEEM-FCID Chronic Food + Drinking Water Residue Input File.
- Attachment 4: DEEM-FCID Chronic Dietary Analysis Results.
- Attachment 5: DEEM-FCID Crit. Com. Contribution Analysis for All Infants (<1 year old).
- Attachment 6: SLUA October 21, 2020.
- Attachment 7: Notes on PDP Data for Chlorothalonil.
- Attachment 8: Acute Dietary Assessment for Chlorothalonil Metabolite SDS-3701.

Attachment 1: DEEM-FCID Acute Food + Drinking Water Residue Input File.

Filename: C:\Users\gkramer\OneDrive - Environmental Protection Agency

(EPA)\Gk\\$\$\$\$Chlorothalonil\CHLOROTHALONIL_ACUTE.R10

Chemical: Chlorothalonil

RfD(Chronic): .02 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day

RfD(Acute): 1 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day

Date created/last modified: 07-12-2022/14:59:25

Program ver. 4.02, 05-10-c

Comment: Values taken from FR 66(48):14330-14442, Mar 12, 2001

| EPA Code | Crop Grp | Commodity Name | Def Res (ppm) | Adj.Factors #1 | Adj.Factors #2 | Comment |
|------------|----------|----------------------------------|---------------|----------------|----------------|---------|
| 0101078000 | 1AB | Carrot | 1.000000 | 1.000 | 1.000 | |
| 0101078001 | 1AB | Carrot-babyfood | 1.000000 | 1.000 | 1.000 | |
| 0101079000 | 1AB | Carrot, juice | 1.000000 | 1.400 | 1.000 | |
| 0101168000 | 1AB | Ginseng, dried | 4.000000 | 1.000 | 1.000 | |
| 0101190000 | 1AB | Horseradish | 4.000000 | 1.000 | 1.000 | |
| 0101251000 | 1AB | Parsnip | 1.000000 | 1.000 | 1.000 | |
| 0101251001 | 1AB | Parsnip-babyfood | 1.000000 | 1.000 | 1.000 | |
| 0103296000 | 1C | Potato, chips | 0.300000 | 1.000 | 1.000 | |
| 0103297000 | 1C | Potato, dry (granules/ flakes) | 0.300000 | 6.500 | 1.000 | |
| 0103297001 | 1C | Potato, dry (granules/ flakes)-b | 0.300000 | 6.500 | 1.000 | |
| 0103298000 | 1C | Potato, flour | 0.300000 | 6.500 | 1.000 | |
| 0103298001 | 1C | Potato, flour-babyfood | 0.300000 | 6.500 | 1.000 | |
| 0103299000 | 1C | Potato, tuber, w/peel | 0.300000 | 1.000 | 1.000 | |
| 0103299001 | 1C | Potato, tuber, w/peel-babyfood | 0.300000 | 1.000 | 1.000 | |
| 0103300000 | 1C | Potato, tuber, w/o peel | 0.300000 | 1.000 | 1.000 | |
| 0103300001 | 1C | Potato, tuber, w/o peel-babyfood | 0.300000 | 1.000 | 1.000 | |
| 0103406000 | 1CD | Yam, true | 0.300000 | 1.000 | 1.000 | |
| 0301165000 | 3A | Garlic, bulb | 1.500000 | 1.000 | 1.000 | |
| 0301165001 | 3A | Garlic, bulb-babyfood | 1.500000 | 1.000 | 1.000 | |
| 0301237000 | 3A | Onion, bulb | 1.500000 | 1.000 | 1.000 | |
| 0301237001 | 3A | Onion, bulb-babyfood | 1.500000 | 1.000 | 1.000 | |
| 0301238000 | 3A | Onion, bulb, dried | 1.500000 | 9.700 | 1.000 | |
| 0301238001 | 3A | Onion, bulb, dried-babyfood | 1.500000 | 9.700 | 1.000 | |
| 0301338000 | 3A | Shallot, bulb | 1.500000 | 1.000 | 1.000 | |
| 0302198000 | 3B | Leek | 10.000000 | 1.000 | 1.000 | |
| 0302239000 | 3B | Onion, green | 10.000000 | 1.000 | 1.000 | |
| 0302338500 | 3B | Shallot, fresh leaves | 10.000000 | 1.000 | 1.000 | |
| 0402062000 | 4B | Broccoli, Chinese | 5.000000 | 1.000 | 1.000 | |
| 0500061000 | 5 | Broccoli | 5.000000 | 1.000 | 1.000 | |
| 0500061001 | 5 | Broccoli-babyfood | 5.000000 | 1.000 | 1.000 | |
| 0500064000 | 5 | Brussels sprouts | 6.000000 | 1.000 | 1.000 | |
| 0500069000 | 5 | Cabbage | 5.000000 | 1.000 | 1.000 | |
| 0500071000 | 5 | Cabbage, Chinese, napa | 5.000000 | 1.000 | 1.000 | |
| 0500072000 | 5 | Cabbage, Chinese, mustard | 5.000000 | 1.000 | 1.000 | |
| 0500083000 | 5 | Cauliflower | 5.000000 | 1.000 | 1.000 | |
| 0600347000 | 6 | Soybean, seed | 0.200000 | 1.000 | 1.000 | |
| 0600348000 | 6 | Soybean, flour | 0.200000 | 2.200 | 1.000 | |
| 0600348001 | 6 | Soybean, flour-babyfood | 0.200000 | 2.200 | 1.000 | |
| 0600349000 | 6 | Soybean, soy milk | 0.200000 | 1.000 | 1.000 | |
| 0600349001 | 6 | Soybean, soy milk-babyfood or in | 0.200000 | 1.000 | 1.000 | |
| 0600350000 | 6 | Soybean, oil | 0.200000 | 1.000 | 1.000 | |
| 0600350001 | 6 | Soybean, oil-babyfood | 0.200000 | 1.000 | 1.000 | |
| 0601043000 | 6A | Bean, snap, succulent | 5.000000 | 1.000 | 1.000 | |
| 0601043001 | 6A | Bean, snap, succulent-babyfood | 5.000000 | 1.000 | 1.000 | |
| 0601257000 | 6A | Pea, edible podded, succulent | 5.000000 | 1.000 | 1.000 | |
| 0603030000 | 6C | Bean, black, seed | 0.100000 | 1.000 | 1.000 | |
| 0603032000 | 6C | Bean, broad, seed | 0.100000 | 1.000 | 1.000 | |
| 0603034000 | 6C | Bean, cowpea, seed | 0.100000 | 1.000 | 1.000 | |
| 0603035000 | 6C | Bean, great northern, seed | 0.100000 | 1.000 | 1.000 | |
| 0603036000 | 6C | Bean, kidney, seed | 0.100000 | 1.000 | 1.000 | |
| 0603038000 | 6C | Bean, lima, seed | 0.100000 | 1.000 | 1.000 | |
| 0603039000 | 6C | Bean, mung, seed | 0.100000 | 1.000 | 1.000 | |
| 0603040000 | 6C | Bean, navy, seed | 0.100000 | 1.000 | 1.000 | |

| | | | | | |
|------------|-----|------------------------------|----------|--------|-------|
| 0603041000 | 6C | Bean, pink, seed | 0.100000 | 1.000 | 1.000 |
| 0603042000 | 6C | Bean, pinto, seed | 0.100000 | 1.000 | 1.000 |
| 0603098000 | 6C | Chickpea, seed | 0.100000 | 1.000 | 1.000 |
| 0603098001 | 6C | Chickpea, seed-babyfood | 0.100000 | 1.000 | 1.000 |
| 0603099000 | 6C | Chickpea, flour | 0.100000 | 1.000 | 1.000 |
| 0603182000 | 6C | Guar, seed | 0.100000 | 1.000 | 1.000 |
| 0603182001 | 6C | Guar, seed-babyfood | 0.100000 | 1.000 | 1.000 |
| 0603203000 | 6C | Lentil, seed | 0.100000 | 1.000 | 1.000 |
| 0801374000 | 8A | Tomatillo | 5.000000 | 1.000 | 1.000 |
| 0801375000 | 8A | Tomato | 5.000000 | 1.000 | 1.000 |
| 0801375001 | 8A | Tomato-babyfood | 5.000000 | 1.000 | 1.000 |
| 0801376000 | 8A | Tomato, paste | 5.000000 | 5.400 | 1.000 |
| 0801376001 | 8A | Tomato, paste-babyfood | 5.000000 | 5.400 | 1.000 |
| 0801377000 | 8A | Tomato, puree | 5.000000 | 3.300 | 1.000 |
| 0801377001 | 8A | Tomato, puree-babyfood | 5.000000 | 3.300 | 1.000 |
| 0801378000 | 8A | Tomato, dried | 5.000000 | 14.300 | 1.000 |
| 0801378001 | 8A | Tomato, dried-babyfood | 5.000000 | 14.300 | 1.000 |
| 0801379000 | 8A | Tomato, juice | 5.000000 | 1.000 | 1.000 |
| 0802148000 | 8BC | Eggplant | 7.000000 | 1.000 | 1.000 |
| 0802234000 | 8BC | Okra | 7.000000 | 1.000 | 1.000 |
| 0802270000 | 8B | Pepper, bell | 7.000000 | 1.000 | 1.000 |
| 0802270001 | 8B | Pepper, bell-babyfood | 7.000000 | 1.000 | 1.000 |
| 0802271000 | 8B | Pepper, bell, dried | 7.000000 | 13.500 | 1.000 |
| 0802271001 | 8B | Pepper, bell, dried-babyfood | 7.000000 | 13.500 | 1.000 |
| 0802272000 | 8BC | Pepper, nonbell | 7.000000 | 1.000 | 1.000 |
| 0802272001 | 8BC | Pepper, nonbell-babyfood | 7.000000 | 1.000 | 1.000 |
| 0802273000 | 8BC | Pepper, nonbell, dried | 7.000000 | 12.800 | 1.000 |
| 0901075000 | 9A | Cantaloupe | 5.000000 | 1.000 | 1.000 |
| 0901187000 | 9A | Honeydew melon | 5.000000 | 1.000 | 1.000 |
| 0901399000 | 9A | Watermelon | 5.000000 | 1.000 | 1.000 |
| 0901400000 | 9A | Watermelon, juice | 5.000000 | 1.000 | 1.000 |
| 0902021000 | 9B | Balsam pear | 5.000000 | 1.000 | 1.000 |
| 0902088000 | 9B | Chayote, fruit | 5.000000 | 1.000 | 1.000 |
| 0902102000 | 9B | Chinese waxgourd | 5.000000 | 1.000 | 1.000 |
| 0902135000 | 9B | Cucumber | 5.000000 | 1.000 | 1.000 |
| 0902308000 | 9B | Pumpkin | 5.000000 | 1.000 | 1.000 |
| 0902309000 | 9B | Pumpkin, seed | 5.000000 | 1.000 | 1.000 |
| 0902356000 | 9B | Squash, summer | 5.000000 | 1.000 | 1.000 |
| 0902356001 | 9B | Squash, summer-babyfood | 5.000000 | 1.000 | 1.000 |
| 0902357000 | 9B | Squash, winter | 5.000000 | 1.000 | 1.000 |
| 0902357001 | 9B | Squash, winter-babyfood | 5.000000 | 1.000 | 1.000 |
| 1201090000 | 12A | Cherry | 0.500000 | 1.000 | 1.000 |
| 1201090001 | 12A | Cherry-babyfood | 0.500000 | 1.000 | 1.000 |
| 1201091000 | 12A | Cherry, juice | 0.500000 | 1.500 | 1.000 |
| 1201091001 | 12A | Cherry, juice-babyfood | 0.500000 | 1.500 | 1.000 |
| 1202012000 | 12B | Apricot | 1.500000 | 1.000 | 1.000 |
| 1202012001 | 12B | Apricot-babyfood | 1.500000 | 1.000 | 1.000 |
| 1202013000 | 12B | Apricot, dried | 1.500000 | 6.000 | 1.000 |
| 1202014000 | 12B | Apricot, juice | 1.500000 | 1.300 | 1.000 |
| 1202014001 | 12B | Apricot, juice-babyfood | 1.500000 | 1.300 | 1.000 |
| 1202230000 | 12B | Nectarine | 0.500000 | 1.000 | 1.000 |
| 1202260000 | 12B | Peach | 0.500000 | 1.000 | 1.000 |
| 1202260001 | 12B | Peach-babyfood | 0.500000 | 1.000 | 1.000 |
| 1202261000 | 12B | Peach, dried | 0.500000 | 7.000 | 1.000 |
| 1202261001 | 12B | Peach, dried-babyfood | 0.500000 | 7.000 | 1.000 |
| 1202262000 | 12B | Peach, juice | 0.500000 | 1.300 | 1.000 |
| 1202262001 | 12B | Peach, juice-babyfood | 0.500000 | 1.300 | 1.000 |
| 1203285000 | 12C | Plum | 0.200000 | 1.000 | 1.000 |
| 1203285001 | 12C | Plum-babyfood | 0.200000 | 1.000 | 1.000 |
| 1203286000 | 12C | Plum, prune, fresh | 0.200000 | 1.000 | 1.000 |
| 1203286001 | 12C | Plum, prune, fresh-babyfood | 0.200000 | 1.000 | 1.000 |
| 1203287000 | 12C | Plum, prune, dried | 0.200000 | 5.000 | 1.000 |
| 1203287001 | 12C | Plum, prune, dried-babyfood | 0.200000 | 5.000 | 1.000 |
| 1203288000 | 12C | Plum, prune, juice | 0.200000 | 1.400 | 1.000 |
| 1203288001 | 12C | Plum, prune, juice-babyfood | 0.200000 | 1.400 | 1.000 |
| 1302057000 | 13B | Blueberry | 1.000000 | 1.000 | 1.000 |
| 1302057001 | 13B | Blueberry-babyfood | 1.000000 | 1.000 | 1.000 |

| | | | | | |
|------------|-----|--------------------------------|-----------|-------|-------|
| 1307130000 | 13G | Cranberry | 5.000000 | 1.000 | 1.000 |
| 1307130001 | 13G | Cranberry-babyfood | 5.000000 | 1.000 | 1.000 |
| 1307131000 | 13G | Cranberry, dried | 5.000000 | 7.900 | 1.000 |
| 1307132000 | 13G | Cranberry, juice | 5.000000 | 1.200 | 1.000 |
| 1307132001 | 13G | Cranberry, juice-babyfood | 5.000000 | 1.200 | 1.000 |
| 1400003000 | 14 | Almond | 0.050000 | 1.000 | 1.000 |
| 1400003001 | 14 | Almond-babyfood | 0.050000 | 1.000 | 1.000 |
| 1400004000 | 14 | Almond, oil | 0.050000 | 2.800 | 1.000 |
| 1400004001 | 14 | Almond, oil-babyfood | 0.050000 | 2.800 | 1.000 |
| 1400155000 | 14 | Hazelnut | 0.100000 | 1.000 | 1.000 |
| 1400156000 | 14 | Hazelnut, oil | 0.100000 | 1.800 | 1.000 |
| 1400282000 | 14 | Pistachio | 0.200000 | 1.000 | 1.000 |
| 1500127000 | 15 | Corn, sweet | 1.000000 | 1.000 | 1.000 |
| 1500127001 | 15 | Corn, sweet-babyfood | 1.000000 | 1.000 | 1.000 |
| 2100228000 | 21 | Mushroom | 1.000000 | 1.000 | 1.000 |
| 2201019000 | 22A | Asparagus | 0.100000 | 1.000 | 1.000 |
| 2201196000 | 22A | Kohlrabi | 5.000000 | 1.000 | 1.000 |
| 2202085000 | 22B | Celery | 20.000000 | 1.000 | 1.000 |
| 2202085001 | 22B | Celery-babyfood | 20.000000 | 1.000 | 1.000 |
| 2202086000 | 22B | Celery, juice | 20.000000 | 1.400 | 1.000 |
| 2202322000 | 22B | Rhubarb | 7.000000 | 1.000 | 1.000 |
| 2302358000 | 23B | Starfruit | 3.000000 | 1.000 | 1.000 |
| 2401211000 | 24A | Lychee | 15.000000 | 1.000 | 1.000 |
| 2401212000 | 24A | Lychee, dried | 15.000000 | 4.000 | 1.000 |
| 2402023000 | 24B | Banana | 0.500000 | 1.000 | 1.000 |
| 2402023001 | 24B | Banana-babyfood | 0.500000 | 1.000 | 1.000 |
| 2402024000 | 24B | Banana, dried | 0.500000 | 4.800 | 1.000 |
| 2402024001 | 24B | Banana, dried-babyfood | 0.500000 | 4.800 | 1.000 |
| 2402215000 | 24B | Mango | 1.000000 | 1.000 | 1.000 |
| 2402215001 | 24B | Mango-babyfood | 1.000000 | 1.000 | 1.000 |
| 2402216000 | 24B | Mango, dried | 1.000000 | 5.900 | 1.000 |
| 2402217000 | 24B | Mango, juice | 1.000000 | 2.000 | 1.000 |
| 2402217001 | 24B | Mango, juice-babyfood | 1.000000 | 2.000 | 1.000 |
| 2402245000 | 24B | Papaya | 20.000000 | 1.000 | 1.000 |
| 2402245001 | 24B | Papaya-babyfood | 20.000000 | 1.000 | 1.000 |
| 2402246000 | 24B | Papaya, dried | 20.000000 | 8.000 | 1.000 |
| 2402247000 | 24B | Papaya, juice | 20.000000 | 2.000 | 1.000 |
| 2402277000 | 24B | Persimmon | 1.500000 | 1.000 | 1.000 |
| 2402283000 | 24B | Plantain | 0.500000 | 1.000 | 1.000 |
| 2402284000 | 24B | Plantain, dried | 0.500000 | 4.800 | 1.000 |
| 2405252000 | 24E | Passionfruit | 3.000000 | 1.000 | 1.000 |
| 2405252001 | 24E | Passionfruit-babyfood | 3.000000 | 1.000 | 1.000 |
| 2405253000 | 24E | Passionfruit, juice | 3.000000 | 2.000 | 1.000 |
| 2405253001 | 24E | Passionfruit, juice-babyfood | 3.000000 | 2.000 | 1.000 |
| 3100044000 | 31 | Beef, meat | 0.030000 | 1.000 | 1.000 |
| 3100044001 | 31 | Beef, meat-babyfood | 0.030000 | 1.000 | 1.000 |
| 3100045000 | 31 | Beef, meat, dried | 0.030000 | 1.920 | 1.000 |
| 3100046000 | 31 | Beef, meat byproducts | 0.200000 | 1.000 | 1.000 |
| 3100046001 | 31 | Beef, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 |
| 3100047000 | 31 | Beef, fat | 0.100000 | 1.000 | 1.000 |
| 3100047001 | 31 | Beef, fat-babyfood | 0.100000 | 1.000 | 1.000 |
| 3100048000 | 31 | Beef, kidney | 0.500000 | 1.000 | 1.000 |
| 3100049000 | 31 | Beef, liver | 0.200000 | 1.000 | 1.000 |
| 3100049001 | 31 | Beef, liver-babyfood | 0.200000 | 1.000 | 1.000 |
| 3200169000 | 32 | Goat, meat | 0.030000 | 1.000 | 1.000 |
| 3200170000 | 32 | Goat, meat byproducts | 0.200000 | 1.000 | 1.000 |
| 3200171000 | 32 | Goat, fat | 0.100000 | 1.000 | 1.000 |
| 3200172000 | 32 | Goat, kidney | 0.500000 | 1.000 | 1.000 |
| 3200173000 | 32 | Goat, liver | 0.200000 | 1.000 | 1.000 |
| 3300189000 | 33 | Horse, meat | 0.030000 | 1.000 | 1.000 |
| 3400290000 | 34 | Pork, meat | 0.030000 | 1.000 | 1.000 |
| 3400290001 | 34 | Pork, meat-babyfood | 0.030000 | 1.000 | 1.000 |
| 3400291000 | 34 | Pork, skin | 0.200000 | 1.000 | 1.000 |
| 3400292000 | 34 | Pork, meat byproducts | 0.200000 | 1.000 | 1.000 |
| 3400292001 | 34 | Pork, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 |
| 3400293000 | 34 | Pork, fat | 0.100000 | 1.000 | 1.000 |
| 3400293001 | 34 | Pork, fat-babyfood | 0.100000 | 1.000 | 1.000 |

| | | | | | |
|------------|-----|----------------------------------|----------|-------|-------|
| 3400294000 | 34 | Pork, kidney | 0.500000 | 1.000 | 1.000 |
| 3400295000 | 34 | Pork, liver | 0.200000 | 1.000 | 1.000 |
| 3500339000 | 35 | Sheep, meat | 0.030000 | 1.000 | 1.000 |
| 3500339001 | 35 | Sheep, meat-babyfood | 0.030000 | 1.000 | 1.000 |
| 3500340000 | 35 | Sheep, meat byproducts | 0.200000 | 1.000 | 1.000 |
| 3500341000 | 35 | Sheep, fat | 0.100000 | 1.000 | 1.000 |
| 3500341001 | 35 | Sheep, fat-babyfood | 0.100000 | 1.000 | 1.000 |
| 3500342000 | 35 | Sheep, kidney | 0.500000 | 1.000 | 1.000 |
| 3500343000 | 35 | Sheep, liver | 0.200000 | 1.000 | 1.000 |
| 3600222000 | 36 | Milk, fat | 0.100000 | 1.000 | 1.000 |
| 3600222001 | 36 | Milk, fat-baby food/infant formu | 0.100000 | 1.000 | 1.000 |
| 3600223000 | 36 | Milk, nonfat solids | 0.100000 | 1.000 | 1.000 |
| 3600223001 | 36 | Milk, nonfat solids-baby food/in | 0.100000 | 1.000 | 1.000 |
| 3600224000 | 36 | Milk, water | 0.100000 | 1.000 | 1.000 |
| 3600224001 | 36 | Milk, water-babyfood/infant form | 0.100000 | 1.000 | 1.000 |
| 3600225001 | 36 | Milk, sugar (lactose)-baby food/ | 0.100000 | 1.000 | 1.000 |
| 8601000000 | 86A | Water, direct, all sources | 1.556000 | 1.000 | 1.000 |
| 8602000000 | 86B | Water, indirect, all sources | 1.556000 | 1.000 | 1.000 |
| 9500109000 | O | Cocoa bean, chocolate | 0.050000 | 1.000 | 1.000 |
| 9500110000 | O | Cocoa bean, powder | 0.050000 | 1.000 | 1.000 |
| 9500115000 | O | Coffee, roasted bean | 0.200000 | 1.000 | 1.000 |
| 9500116000 | O | Coffee, instant | 0.200000 | 1.000 | 1.000 |
| 9500263000 | O | Peanut | 0.300000 | 1.000 | 1.000 |
| 9500264000 | O | Peanut, butter | 0.300000 | 1.200 | 1.000 |
| 9500265000 | O | Peanut, oil | 0.300000 | 1.000 | 1.000 |
| 9500275000 | O | Peppermint | 2.000000 | 1.000 | 1.000 |
| 9500276000 | O | Peppermint, oil | 2.000000 | 1.000 | 1.000 |
| 9500352000 | O | Spearmint | 2.000000 | 1.000 | 1.000 |
| 9500353000 | O | Spearmint, oil | 2.000000 | 1.000 | 1.000 |

Attachment 2: DEEM-FCID Acute Analysis Results

DEEM-FCID ACUTE Analysis for CHLOROTHALONIL NHANES 2005-2010 2-Day
Residue file: CHLOROTHALONIL_ACUTE.R10 Adjustment factor #2 used.
Analysis Date: 07-28-2022/09:04:58 Residue file dated: 07-27-2022/15:56:47
RAC/FF intake summed over 24 hours
Run Comment: "Values taken from FR 66(48):14330-14442, Mar 12, 2001"
=====

Summary calculations--per capita:

| | 95th Percentile Exposure | % aRfD | 99th Percentile Exposure | % aRfD | 99.9th Percentile Exposure | % aRfD |
|---------------|-----------------------------|--------|-----------------------------|--------|-------------------------------|--------|
| | ----- | ----- | ----- | ----- | ----- | ----- |
| Female 13-49: | 0.107570 | 10.76 | 0.149742 | 14.97 | 0.243424 | 24.34 |

Attachment 3: DEEM-FCID Chronic Food + Drinking Water Residue Input File.

Filename: M:\\$\$\$\$\$chlorothalonil\CHLOROTHALONIL_CHRONIC.R10

Chemical: Chlorothalonil

RfD(Chronic): .02 mg/kg bw/day NOEL(Chronic): 2 mg/kg bw/day

RfD(Acute): .015 mg/kg bw/day NOEL(Acute): 100 mg/kg bw/day

Date created/last modified: 07-12-2022/14:57:19 Program ver. 4.02, 05-10-c

Comment:

| EPA Code | Crop Grp | Commodity Name | Def Res (ppm) | Adj. Factors #1 | #2 | Comment |
|------------|----------|--|---------------|-----------------|-------|---------|
| 0101078000 | 1AB | Carrot | 0.003995 | 0.350 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Carrot; N/P; PCT=35% | | | | |
| 0101078001 | 1AB | Carrot-babyfood | 0.091974 | 0.350 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Carrot_BF; N/P; PCT=35% | | | | |
| 0101079000 | 1AB | Carrot, juice | 0.003995 | 0.350 | 1.400 | A3.1: |
| | | Full comment: A3.1: T=1; Carrot; N/P; PCT=35%; PF=1.4 | | | | |
| 0101168000 | 1AB | Ginseng, dried | 4.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=4; No PDP Data; PCT=100% | | | | |
| 0101190000 | 1AB | Horseradish | 0.003995 | 0.350 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=4; Carrot; N; PCT=35% | | | | |
| 0101251000 | 1AB | Parsnip | 0.003995 | 0.350 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=1; Carrot; N; PCT=35% | | | | |
| 0101251001 | 1AB | Parsnip-babyfood | 0.003995 | 0.350 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=1; Carrot; P; PCT=35% | | | | |
| 0103296000 | 1C | Potato, chips | 0.007366 | 1.000 | 1.000 | A3.2: |
| | | Full comment: A3.2: T=0.1; Potato_wPeel_Uncoo; B; PCT=70% | | | | |
| 0103297000 | 1C | Potato, dry (granules/ flakes) | 0.007366 | 1.000 | 6.500 | A3.1: |
| | | Full comment: A3.1: T=1; Carrot; N/P; PCT=35%; PF=6.5 | | | | |
| 0103297001 | 1C | Potato, dry (granules/ flakes)-b | 0.007366 | 1.000 | 6.500 | A3.2: |
| | | Full comment: A3.2: T=0.1; Potato_wPeel_Uncoo; B; PCT=70%; | | | | |
| 0103298000 | 1C | Potato, flour | 0.007366 | 1.000 | 6.500 | A3.2: |
| | | Full comment: A3.2: T=0.1; Potato_wPeel_Uncoo; B; PCT=70%;PF=6.5 | | | | |
| 0103298001 | 1C | Potato, flour-babyfood | 0.007366 | 1.000 | 6.500 | A3.2: |
| | | Full comment: A3.2: T=0.1; Potato_wPeel_Uncoo; B; PCT=70%;PF=6.5 | | | | |
| 0103299000 | 1C | Potato, tuber, w/peel | 0.007366 | 0.700 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70% | | | | |
| 0103299001 | 1C | Potato, tuber, w/peel-babyfood | 0.007366 | 0.700 | 1.000 | A3.1: |
| | | Full comment: A3.1: Potato_wPeel_Uncoo; T=0.1; N/P; PCT=70% | | | | |
| 0103300000 | 1C | Potato, tuber, w/o peel | | | | |
| | | 110-Uncooked; Fresh or N/S; Cook Meth N/S | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 210-Cooked; Fresh or N/S; Cook Meth N/S | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 211-Cooked; Fresh or N/S; Baked | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 212-Cooked; Fresh or N/S; Boiled | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 213-Cooked; Fresh or N/S; Fried | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 221-Cooked; Frozen; Baked | | | | |
| | | 0.004001 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wopeel_Froz; N/P; PCT=70%; PF= | | | | |
| | | 223-Cooked; Frozen; Fried | | | | |
| | | 0.004001 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wopeel_Froz; N/P; PCT=70%; PF= | | | | |
| | | 232-Cooked; Dried; Boiled | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| | | 233-Cooked; Dried; Fried | | | | |
| | | 0.007366 0.700 6.500 A1.1: | | | | |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo;N/P;PCT=70%;PF=6.5 | | | | |
| | | 240-Cooked; Canned; Cook Meth N/S | | | | |
| | | 0.007366 0.700 1.000 A1.1: | | | | |

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|------------|-----|--|-----------|-------|-------|--------|
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF=242-Cooked; Canned; Boiled | 0.007366 | 0.700 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF=252-Cooked; Cured, etc; Boiled | 0.007366 | 0.700 | 1.000 | A1.1: |
| 0103300001 | 1C | Potato, tuber, w/o peel-babyfood | 0.007366 | 0.700 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Potato_wPeel_Uncoo; N/P; PCT=70%; PF= | | | | |
| 0103406000 | 1CD | Yam, true | 0.007366 | 0.700 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=0.1; Potato_wPeel_Uncoo; N; PCT=70% | | | | |
| 0301165000 | 3A | Garlic, bulb | 0.002500 | 0.500 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=0.5; Onion_Bulb; N; PCT=50% | | | | |
| 0301165001 | 3A | Garlic, bulb-babyfood | 0.002500 | 0.500 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=0.5; Onion_Bulb; P; PCT=50% | | | | |
| 0301237000 | 3A | Onion, bulb | 0.002500 | 0.500 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.5; Onion_Bulb; N/P; PCT=50% | | | | |
| 0301237001 | 3A | Onion, bulb-babyfood | 0.002500 | 0.500 | 1.000 | A3.1: |
| | | Full comment: A3.1: Onion_Bulb; T=0.5; N/P; PCT=50% | | | | |
| 0301238000 | 3A | Onion, bulb, dried | 0.002500 | 1.000 | 9.700 | A3.2: |
| | | Full comment: A3.2: T=0.5; Onion_Bulb; B; PCT=50%; PF=9.7 | | | | |
| 0301238001 | 3A | Onion, bulb, dried-babyfood | 0.002500 | 1.000 | 9.700 | A3.2: |
| | | Full comment: A3.2: T=0.5; Onion_Bulb; B; PCT=50%; PF=9.7 | | | | |
| 0301338000 | 3A | Shallot, bulb | 0.002500 | 0.500 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=0.5; Onion_Bulb; N; PCT=50% | | | | |
| 0302198000 | 3B | Leek | 10.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100%; Tol. Incr. | | | | |
| 0302239000 | 3B | Onion, green | 10.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100%; Tol. Incr. | | | | |
| 0302338500 | 3B | Shallot, fresh leaves | 10.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100%; Tol. Incr. | | | | |
| 0402062000 | 4B | Broccoli, Chinese | 0.003905 | 0.050 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Broccoli; N; PCT=5% | | | | |
| 0500061000 | 5 | Broccoli | 0.003905 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=5; Broccoli; N/P; PCT=5% | | | | |
| 0500061001 | 5 | Broccoli-babyfood | 0.003905 | 0.050 | 1.000 | A3.1: |
| | | Full comment: A3.1: Broccoli; T=5; N/P; PCT=5% | | | | |
| 0500064000 | 5 | Brussels sprouts | 6.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100%; Tol. Incr. | | | | |
| 0500069000 | 5 | Cabbage | 5.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100% | | | | |
| 0500071000 | 5 | Cabbage, Chinese, napa | 5.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100% | | | | |
| 0500072000 | 5 | Cabbage, Chinese, mustard | 5.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100% | | | | |
| 0500083000 | 5 | Cauliflower | 5.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100% | | | | |
| 0600347000 | 6 | Soybean, seed | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1% | | | | |
| 0600348000 | 6 | Soybean, flour | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1%; PF=2.2 | | | | |
| 0600348001 | 6 | Soybean, flour-babyfood | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1%; PF=2.2 | | | | |
| 0600349000 | 6 | Soybean, soy milk | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1%; PF=1 | | | | |
| 0600349001 | 6 | Soybean, soy milk-babyfood or in | 0.005000 | 1.000 | 1.000 | A1.2: |
| | | Full comment: A1.2: T=0.2; InfantFormula_Soy; B; PCT=100%; PF=1 | | | | |
| 0600350000 | 6 | Soybean, oil | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1% | | | | |
| 0600350001 | 6 | Soybean, oil-babyfood | 0.200000 | 0.010 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=1% | | | | |
| 0601043000 | 6A | Bean, snap, succulent | | | | |
| | | 110-Uncooked; Fresh or N/S; Cook Meth N/S | 0.142175 | 0.250 | 1.000 | A2: T= |
| | | Full comment: A2: T=5; Bean_Green_Fresh; P; PCT=25% | | | | |
| | | 210-Cooked; Fresh or N/S; Cook Meth N/S | 0.142175 | 0.250 | 1.000 | A2: T= |
| | | Full comment: A2: T=5; Bean_Green_Fresh; P; PCT=25% | | | | |
| | | 211-Cooked; Fresh or N/S; Baked | | | | |

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| | | | 0.142175 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Fresh; P; PCT=25% | | | | | |
| | 212-Cooked; Fresh or N/S; Boiled | | | | | |
| | | | 0.001435 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Canned; P; PCT=25% | | | | | |
| | 213-Cooked; Fresh or N/S; Fried | | | | | |
| | | | 0.142175 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Fresh; P; PCT=25% | | | | | |
| | 215-Cooked; Fresh or N/S; Boiled/baked | | | | | |
| | | | 0.001435 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Canned; P; PCT=25% | | | | | |
| | 220-Cooked; Frozen; Cook Meth N/S | | | | | |
| | | | 0.001722 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Frozen; P; PCT=25% | | | | | |
| | 221-Cooked; Frozen; Baked | | | | | |
| | | | 0.001722 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Frozen; P; PCT=25% | | | | | |
| | 222-Cooked; Frozen; Boiled | | | | | |
| | | | 0.001722 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Frozen; P; PCT=25% | | | | | |
| | 232-Cooked; Dried; Boiled | | | | | |
| | | | 0.001435 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Canned; P; PCT=25% | | | | | |
| | 240-Cooked; Canned; Cook Meth N/S | | | | | |
| | | | 0.001435 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Canned; P; PCT=25% | | | | | |
| | 242-Cooked; Canned; Boiled | | | | | |
| | | | 0.001435 | 0.250 | 1.000 | A2: T= |
| | Full comment: A2: T=5; Bean_Green_Canned; P; PCT=25% | | | | | |
| 0601043001 | 6A | Bean, snap, succulent-babyfood | 0.142175 | 0.250 | 1.000 | A3.1: |
| | Full comment: A3.1: Bean_Green_Fresh; T=5; N/P; PCT=25% | | | | | |
| 0603030000 | 6C | Bean, black, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603032000 | 6C | Bean, broad, seed | 0.009809 | 1.000 | 1.000 | A5.2: |
| | Full comment: A5.2: T=0.1; Bean_Black; B; PCT=2.5% | | | | | |
| 0603034000 | 6C | Bean, cowpea, seed | 0.009809 | 1.000 | 1.000 | A5.2: |
| | Full comment: A5.2: T=0.1; Bean_Black; B; PCT=2.5% | | | | | |
| 0603035000 | 6C | Bean, great northern, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603036000 | 6C | Bean, kidney, seed | 0.008075 | 1.000 | 1.000 | A1.2: |
| | Full comment: A1.2: T=0.1; Bean_Kidney; B; PCT=100% | | | | | |
| 0603038000 | 6C | Bean, lima, seed | 0.142175 | 1.000 | 1.000 | A5.1: |
| | Full comment: A5.1: T=0.1; Bean_Green_Fresh; B; PCT=25% | | | | | |
| 0603039000 | 6C | Bean, mung, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603040000 | 6C | Bean, navy, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603041000 | 6C | Bean, pink, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603042000 | 6C | Bean, pinto, seed | 0.010172 | 1.000 | 1.000 | A1.2: |
| | Full comment: A1.2: T=0.1; Bean_Pinto; B; PCT=100% | | | | | |
| 0603098000 | 6C | Chickpea, seed | 0.009864 | 1.000 | 1.000 | A1.2: |
| | Full comment: A1.2: T=0.1; Bean_Garbanzo; B; PCT=100% | | | | | |
| 0603098001 | 6C | Chickpea, seed-babyfood | 0.009864 | 1.000 | 1.000 | A3.3: |
| | Full comment: A3.3: T=0.1; Bean_Garbanzo; B; PCT=100% | | | | | |
| 0603099000 | 6C | Chickpea, flour | 0.009864 | 1.000 | 1.000 | A3.3: |
| | Full comment: A3.3: T=0.1; Bean_Garbanzo; B; PCT=100%; PF=1 | | | | | |
| 0603182000 | 6C | Guar, seed | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603182001 | 6C | Guar, seed-babyfood | 0.100000 | 1.000 | 1.000 | A0: T= |
| | Full comment: A0: T=0.1; No PDP Data; PCT=100% | | | | | |
| 0603203000 | 6C | Lentil, seed | 0.009864 | 1.000 | 1.000 | A5.2: |
| | Full comment: A5.2: T=0.1; Bean_Garbanzo; B; PCT=2.5% | | | | | |
| 0603256000 | 6C | Pea, dry | 0.100000 | 1.000 | 1.000 | A3.3: |
| | Full comment: A3.3: T=0.1; Bean_Garbanzo; B; PCT=100%; PF=1 | | | | | |
| 0603256001 | 6C | Pea, dry-babyfood | 0.100000 | 1.000 | 1.000 | A3.3: |
| | Full comment: A3.3: T=0.1; Bean_Garbanzo; B; PCT=100%; PF=1 | | | | | |
| 0603258000 | 6C | Pea, pigeon, seed | 0.100000 | 1.000 | 1.000 | A3.3: |
| | Full comment: A3.3: T=0.1; Bean_Garbanzo; B; PCT=100%; PF=1 | | | | | |
| 0801374000 | 8A | Tomatillo | 0.010310 | 0.550 | 1.000 | A4.1: |
| | Full comment: A4.1: T=5; Tomato_Fresh; N; PCT=55% | | | | | |

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| 0801375000 | 8A | Tomato | | | | | | |
| | | 110-Uncooked; Fresh or N/S; Cook Meth N/S | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 150-Uncooked; Cured, etc; Cook Meth N/S | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 210-Cooked; Fresh or N/S; Cook Meth N/S | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 211-Cooked; Fresh or N/S; Baked | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 212-Cooked; Fresh or N/S; Boiled | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 213-Cooked; Fresh or N/S; Fried | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 214-Cooked; Fresh or N/S; Fried/baked | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 215-Cooked; Fresh or N/S; Boiled/baked | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=5; Tomato_Fresh; N/P; PCT=55% | | | | | | |
| | | 221-Cooked; Frozen; Baked | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Fresh; P; PCT=55% | | | | | | |
| | | 222-Cooked; Frozen; Boiled | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Fresh; P; PCT=55% | | | | | | |
| | | 232-Cooked; Dried; Boiled | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Fresh; P; PCT=55% | | | | | | |
| | | 240-Cooked; Canned; Cook Meth N/S | | | | | | |
| | | | 0.004067 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Canned; P; PCT=55% | | | | | | |
| | | 242-Cooked; Canned; Boiled | | | | | | |
| | | | 0.004067 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Canned; P; PCT=55% | | | | | | |
| | | 252-Cooked; Cured, etc; Boiled | | | | | | |
| | | | 0.010310 | 0.550 | 1.000 | A2: T= | | |
| | | Full comment: A2: T=5; Tomato_Fresh; P; PCT=55% | | | | | | |
| 0801375001 | 8A | Tomato-babyfood | 0.010310 | 1.000 | 1.000 | A3.2: | | |
| | | Full comment: A3.2: T=5; Tomato_Fresh; B; PCT=55% | | | | | | |
| 0801376000 | 8A | Tomato, paste | 0.006998 | 1.000 | 1.000 | A1.2: | | |
| | | Full comment: A1.2: T=5; Tomato_Paste; B; PCT=100% | | | | | | |
| 0801376001 | 8A | Tomato, paste-babyfood | 0.006998 | 1.000 | 1.000 | A3.3: | | |
| | | Full comment: A3.3: T=5; Tomato_Paste; B; PCT=100% | | | | | | |
| 0801377000 | 8A | Tomato, puree | 0.006998 | 1.000 | 1.000 | A3.3: | | |
| | | Full comment: A3.3: T=5; Tomato_Paste; B; PCT=100% | | | | | | |
| 0801377001 | 8A | Tomato, puree-babyfood | 0.006998 | 1.000 | 1.000 | A3.3: | | |
| | | Full comment: A3.3: T=5; Tomato_Paste; B; PCT=100% | | | | | | |
| 0801378000 | 8A | Tomato, dried | 0.010310 | 1.000 | 14.300 | A3.3: | | |
| | | Full comment: A3.3: T=5; Tomato_fresh; B; PCT=55%; PF=14.3 | | | | | | |
| 0801378001 | 8A | Tomato, dried-babyfood | 0.010310 | 1.000 | 14.300 | A3.3: | | |
| | | Full comment: A3.3: T=5; Tomato_fresh; B; PCT=55%; PF=14.3 | | | | | | |
| 0801379000 | 8A | Tomato, juice | 0.004067 | 1.000 | 1.000 | A3.1: | | |
| | | Full comment: A3.1: Tomato_Canned; T=5; N/P; PCT=55% | | | | | | |
| 0802148000 | 8BC | Eggplant | 0.005268 | 0.100 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=6; Eggplant; N/P; PCT=10% | | | | | | |
| 0802234000 | 8BC | Okra | 7.000000 | 1.000 | 1.000 | A0: T= | | |
| | | Full comment: A0: T=6; No PDP Data; PCT=100%; Tol. Incr. | | | | | | |
| 0802270000 | 8B | Pepper, bell | 0.007365 | 0.200 | 1.000 | A1.1: | | |
| | | Full comment: A1.1: T=6; Pepper_Bell; N/P; PCT=20% | | | | | | |
| 0802270001 | 8B | Pepper, bell-babyfood | 0.007365 | 0.200 | 1.000 | A3.1: | | |
| | | Full comment: A3.1: Pepper_Bell; T=6; N/P; PCT=20% | | | | | | |
| 0802271000 | 8B | Pepper, bell, dried | 0.007365 | 1.000 | 1.000 | A3.2: | | |
| | | Full comment: A3.2: T=6; Pepper_Bell; B; PCT=20%; PF=13.5 | | | | | | |
| 0802271001 | 8B | Pepper, bell, dried-babyfood | 0.007365 | 1.000 | 1.000 | A3.2: | | |
| | | Full comment: A3.2: T=6; Pepper_Bell; B; PCT=20%; PF=13.5 | | | | | | |
| 0802272000 | 8BC | Pepper, nonbell | 7.000000 | 1.000 | 1.000 | A0: T= | | |

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|------------|-----|---|-----------------------------|-------|--------|--------|
| 0802272001 | 8BC | Pepper, nonbell-babyfood | 7.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=6; No PDP Data; PCT=100%;Tol. Incr. | | | | |
| 0802273000 | 8BC | Pepper, nonbell, dried | 7.000000 | 1.000 | 12.800 | A0: T= |
| | | Full comment: A0: T=6; No PDP Data; PCT=100%; PF=12.8 | | | | |
| 0901075000 | 9A | Cantaloupe | 0.004192 | 0.150 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=5; Cantaloupe; N/P; PCT=15% | | | | |
| 0901187000 | 9A | Honeydew melon | 0.004192 | 0.150 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Cantaloupe; N; PCT=15% | | | | |
| 0901399000 | 9A | Watermelon | 0.010000 | 0.650 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=5; Watermelon; N/P; PCT=65% | | | | |
| 0901400000 | 9A | Watermelon, juice | 0.010000 | 0.650 | 1.000 | A3.1: |
| | | Full comment: A3.1: T=5; Watermelon; N/P; PCT=65%; PF=1 | | | | |
| 0902021000 | 9B | Balsam pear | 0.007215 | 0.700 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Cucumber; N; PCT=70% | | | | |
| 0902088000 | 9B | Chayote, fruit | 0.012000 | 0.600 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Squash_Summer; N; PCT=60% | | | | |
| 0902102000 | 9B | Chinese waxgourd | 0.007215 | 0.700 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Cucumber; N; PCT=70% | | | | |
| 0902135000 | 9B | Cucumber | 0.007215 | 0.700 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=5; Cucumber; N/P; PCT=70% | | | | |
| 0902308000 | 9B | Pumpkin | 0.016656 | 0.600 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Squash_Winter_Fres; N; PCT=60% | | | | |
| 0902309000 | 9B | Pumpkin, seed | 5.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=5; No PDP Data; PCT=100%; | | | | |
| 0902356000 | 9B | Squash, summer | 0.012000 | 0.600 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=5; Squash_Summer; N/P; PCT=60% | | | | |
| 0902356001 | 9B | Squash, summer-babyfood | 0.012000 | 0.600 | 1.000 | A3.1: |
| | | Full comment: A3.1: Squash_Summer; T=5; N/P; PCT=60% | | | | |
| 0902357000 | 9B | Squash, winter | | | | |
| | | 210-Cooked; Fresh or N/S; Cook Meth N/S | | | | |
| | | 0.016656 0.600 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=5; Squash_Winter_Fres; N/P; PCT=60% | | | | |
| | | 211-Cooked; Fresh or N/S; Baked | | | | |
| | | 0.016656 0.600 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=5; Squash_Winter_Fres; N/P; PCT=60% | | | | |
| | | 212-Cooked; Fresh or N/S; Boiled | | | | |
| | | 0.016656 0.600 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=5; Squash_Winter_Fres; N/P; PCT=60% | | | | |
| | | 215-Cooked; Fresh or N/S; Boiled/baked | | | | |
| | | 0.016656 0.600 1.000 A1.1: | | | | |
| | | Full comment: A1.1: T=5; Squash_Winter_Fres; N/P; PCT=60% | | | | |
| | | 222-Cooked; Frozen; Boiled | 0.007378 0.600 1.000 A2: T= | | | |
| | | Full comment: A2: T=5; Squash_Winter_Froz; P; PCT=60% | | | | |
| | | 242-Cooked; Canned; Boiled | 0.016656 0.600 1.000 A2: T= | | | |
| | | Full comment: A2: T=5; Squash_Winter_Fres; P; PCT=60% | | | | |
| 0902357001 | 9B | Squash, winter-babyfood | 0.016656 0.600 1.000 A3.1: | | | |
| | | Full comment: A3.1: Squash_Winter_Fres; T=5; N/P; PCT=60% | | | | |
| 1201090000 | 12A | Cherry | 0.004028 0.350 1.000 A1.1: | | | |
| | | Full comment: A1.1: T=0.5; Cherry; N/P; PCT=35% | | | | |
| 1201090001 | 12A | Cherry-babyfood | 0.004028 0.350 1.000 A3.1: | | | |
| | | Full comment: A3.1: Cherry; T=0.5; N/P; PCT=35% | | | | |
| 1201091000 | 12A | Cherry, juice | 0.004028 0.350 1.500 A3.1: | | | |
| | | Full comment: A3.1: T=0.5; Cherry; N/P; PCT=35%; PF=1.5 | | | | |
| 1201091001 | 12A | Cherry, juice-babyfood | 0.004028 0.350 1.500 A3.1: | | | |
| | | Full comment: A3.1: T=0.5; Cherry; N/P; PCT=35%; PF=1.5 | | | | |
| 1202012000 | 12B | Apricot | 0.005077 0.350 1.000 A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; N; PCT=35% | | | | |
| 1202012001 | 12B | Apricot-babyfood | 0.005077 0.350 1.000 A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; P; PCT=35% | | | | |
| 1202013000 | 12B | Apricot, dried | 0.005077 1.000 6.000 A5.1: | | | |
| | | Full comment: A5.1: T=0.5; Plum; B; PCT=35%; PF=6 | | | | |
| 1202014000 | 12B | Apricot, juice | 0.005077 0.350 1.300 A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; P; PCT=35%; PF=1.3 | | | | |
| 1202014001 | 12B | Apricot, juice-babyfood | 0.005077 0.350 1.300 A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; P; PCT=35%; PF=1.3 | | | | |
| 1202230000 | 12B | Nectarine | 0.004952 1.000 1.000 A1.1: | | | |

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|------------|--|---|--------|--|--|--|
| | | Full comment: A1.1: T=0.5; Nectarine; N/P; PCT=100% | | | | |
| 1202260000 | 12B Peach | 0.002963 0.300 1.000 | A1.1: | | | |
| | | Full comment: A1.1: T=0.5; Peach_Fresh; N/P; PCT=30% | | | | |
| 1202260001 | 12B Peach-babyfood | 0.002963 0.300 1.000 | A3.1: | | | |
| | | Full comment: A3.1: Peach_Fresh; T=0.5; N/P; PCT=30% | | | | |
| 1202261000 | 12B Peach, dried | 0.002963 1.000 7.000 | A3.2: | | | |
| | | Full comment: A3.2: T=0.5; Peach_Fresh; B; PCT=30%; PF=7 | | | | |
| 1202261001 | 12B Peach, dried-babyfood | 0.002963 1.000 7.000 | A3.2: | | | |
| | | Full comment: A3.2: T=0.5; Peach_Fresh; B; PCT=30%; PF=7 | | | | |
| 1202262000 | 12B Peach, juice | 0.004004 0.300 1.000 | A3.1: | | | |
| | | Full comment: A3.1: T=0.5; Peach_Canned; N/P; PCT=30%; PF=1.3 | | | | |
| 1202262001 | 12B Peach, juice-babyfood | 0.004004 0.300 1.000 | A3.1: | | | |
| | | Full comment: A3.1: T=0.5; Peach_Canned; N/P; PCT=30%; PF=1.3 | | | | |
| 1203285000 | 12C Plum | 0.005077 0.350 1.000 | A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; N; PCT=35% | | | | |
| 1203285001 | 12C Plum-babyfood | 0.005077 0.350 1.000 | A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; N; PCT=35% | | | | |
| 1203286000 | 12C Plum, prune, fresh | 0.005077 0.350 1.000 | A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; N; PCT=35% | | | | |
| 1203286001 | 12C Plum, prune, fresh-babyfood | 0.005077 0.350 1.000 | A5.1: | | | |
| | | Full comment: A5.1: T=0.5; Plum; B; PCT=35% | | | | |
| 1203287000 | 12C Plum, prune, dried | 0.005077 1.000 5.000 | A5.1: | | | |
| | | Full comment: A5.1: T=0.5; Plum; B; PCT=35%; PF=5 | | | | |
| 1203287001 | 12C Plum, prune, dried-babyfood | 0.005077 1.000 5.000 | A5.1: | | | |
| | | Full comment: A5.1: T=0.5; Plum; B; PCT=35%; PF=5 | | | | |
| 1203288000 | 12C Plum, prune, juice | 0.005077 0.350 1.400 | A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; P; PCT=35%; PF=1.4 | | | | |
| 1203288001 | 12C Plum, prune, juice-babyfood | 0.005077 0.350 1.400 | A4.1: | | | |
| | | Full comment: A4.1: T=0.5; Plum; P; PCT=35%; PF=1.4 | | | | |
| 1302057000 | 13B Blueberry | 0.012228 0.100 1.000 | A1.1: | | | |
| | | Full comment: A1.1: T=1; Blueberry_Fresh; N/P; PCT=10% | | | | |
| 1302057001 | 13B Blueberry-babyfood | 0.012228 0.100 1.000 | A3.1: | | | |
| | | Full comment: A3.1: Blueberry_Fresh; T=1; N/P; PCT=10% | | | | |
| 1307130000 | 13G Cranberry | 0.060881 1.000 1.000 | A1.1: | | | |
| | | Full comment: A1.1: T=5; Cranberry; N/P; PCT=100% | | | | |
| 1307130001 | 13G Cranberry-babyfood | 0.060881 1.000 1.000 | A3.1: | | | |
| | | Full comment: A3.1: T=5; Cranberry; N/P; PCT=100%; PF=1 | | | | |
| 1307131000 | 13G Cranberry, dried | 0.060881 1.000 7.900 | A3.1: | | | |
| | | Full comment: A3.1: T=5; Cranberry; N/P; PCT=100%; PF=7.9 | | | | |
| 1307132000 | 13G Cranberry, juice | 0.060881 1.000 1.200 | A3.1: | | | |
| | | Full comment: A3.1: T=5; Cranberry; N/P; PCT=100%; PF=1.2 | | | | |
| 1307132001 | 13G Cranberry, juice-babyfood | 0.060881 1.000 1.200 | A3.1: | | | |
| | | Full comment: A3.1: T=5; Cranberry; N/P; PCT=100%; PF=1.2 | | | | |
| 1400003000 | 14 Almond | 0.000500 0.200 1.000 | A1.1: | | | |
| | | Full comment: A1.1: T=0.05; Almond; N/P; PCT=20% | | | | |
| 1400003001 | 14 Almond-babyfood | 0.000500 0.200 1.000 | A3.1: | | | |
| | | Full comment: A3.1: Almond; T=0.05; N/P; PCT=20% | | | | |
| 1400004000 | 14 Almond, oil | 0.000500 1.000 2.800 | A3.2: | | | |
| | | Full comment: A3.2: T=0.05; Almond; B; PCT=100%; PF=2.8 | | | | |
| 1400004001 | 14 Almond, oil-babyfood | 0.000500 1.000 2.800 | A3.2: | | | |
| | | Full comment: A3.2: T=0.05; Almond; B; PCT=100%; PF=2.8 | | | | |
| 1400155000 | 14 Hazelnut | 0.000500 1.000 1.000 | A4.1: | | | |
| | | Full comment: A4.1: T=0.1; Almond; P; PCT=100% | | | | |
| 1400156000 | 14 Hazelnut, oil | 0.000500 1.000 1.800 | A5.1: | | | |
| | | Full comment: A5.1: T=0.1; Almond; B; PCT=100%; PF=1.8 | | | | |
| 1400282000 | 14 Pistachio | 0.000500 1.000 1.000 | A4.1: | | | |
| | | Full comment: A4.1: T=0.2; Almond; P; PCT=100% | | | | |
| 1500127000 | 15 Corn, sweet | | | | | |
| | 110-Uncooked; Fresh or N/S; Cook Meth N/S | | | | | |
| | | 0.003404 0.050 1.000 | A1.1: | | | |
| | Full comment: A1.1: T=1; Corn_Sweet_Fresh; N/P; PCT=5% | | | | | |
| | 140-Uncooked; Canned; Cook Meth N/S | | | | | |
| | | 0.003003 0.050 1.000 | A2: T= | | | |
| | Full comment: A2: T=1; Corn_Sweet_Canned; P; PCT=5% | | | | | |
| | 210-Cooked; Fresh or N/S; Cook Meth N/S | | | | | |
| | | 0.003404 0.050 1.000 | A1.1: | | | |
| | Full comment: A1.1: T=1; Corn_Sweet_Fresh; N/P; PCT=5% | | | | | |

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| | | 211-Cooked; Fresh or N/S; Baked | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Fresh; N/P; PCT=5% | | | | |
| | | 212-Cooked; Fresh or N/S; Boiled | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Fresh; N/P; PCT=5% | | | | |
| | | 213-Cooked; Fresh or N/S; Fried | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Fresh; N/P; PCT=5% | | | | |
| | | 220-Cooked; Frozen; Cook Meth N/S | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Frozen; N/P; PCT=5% | | | | |
| | | 221-Cooked; Frozen; Baked | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Frozen; N/P; PCT=5% | | | | |
| | | 222-Cooked; Frozen; Boiled | 0.003404 | 0.050 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Corn_Sweet_Frozen; N/P; PCT=5% | | | | |
| | | 232-Cooked; Dried; Boiled | 0.003404 | 0.050 | 1.000 | A2: T= |
| | | Full comment: A2: T=1; Corn_Sweet_Fresh; P; PCT=5% | | | | |
| | | 240-Cooked; Canned; Cook Meth N/S | 0.003003 | 0.050 | 1.000 | A2: T= |
| | | Full comment: A2: T=1; Corn_Sweet_Canned; P; PCT=5% | | | | |
| | | 242-Cooked; Canned; Boiled | 0.003003 | 0.050 | 1.000 | A2: T= |
| | | Full comment: A2: T=1; Corn_Sweet_Canned; P; PCT=5% | | | | |
| | | 243-Cooked; Canned; Fried | 0.003003 | 0.050 | 1.000 | A2: T= |
| | | Full comment: A2: T=1; Corn_Sweet_Canned; P; PCT=5% | | | | |
| 1500127001 | 15 | Corn, sweet-babyfood | 0.003404 | 0.050 | 1.000 | A3.1: |
| | | Full comment: A3.1: Corn_Sweet_Fresh; T=1; N/P; PCT=5% | | | | |
| 2201019000 | 22A | Asparagus | | | | |
| | | 110-Uncooked; Fresh or N/S; Cook Meth N/S | 0.009995 | 0.400 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Asparagus; N/P; PCT=40% | | | | |
| | | 212-Cooked; Fresh or N/S; Boiled | 0.009995 | 0.400 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Asparagus; N/P; PCT=40% | | | | |
| | | 213-Cooked; Fresh or N/S; Fried | 0.009995 | 0.400 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Asparagus; N/P; PCT=40% | | | | |
| | | 222-Cooked; Frozen; Boiled | 0.009995 | 0.400 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.1; Asparagus; N/P; PCT=40% | | | | |
| | | 242-Cooked; Canned; Boiled | 0.001540 | 0.400 | 1.000 | A2: T= |
| | | Full comment: A2: T=0.1; Asparagus_Canned; P; PCT=40% | | | | |
| 2201196000 | 22A | Kohlrabi | 0.009995 | 0.400 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=5; Asparagus; N; PCT=40% | | | | |
| 2202085000 | 22B | Celery | 0.050419 | 0.700 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=15; Celery; N/P; PCT=70% | | | | |
| 2202085001 | 22B | Celery-babyfood | 0.050419 | 0.700 | 1.000 | A3.1: |
| | | Full comment: A3.1: Celery; T=15; N/P; PCT=70% | | | | |
| 2202086000 | 22B | Celery, juice | 0.050419 | 0.700 | 1.400 | A3.1: |
| | | Full comment: A3.1: T=15; Celery; N/P; PCT=70%; PF=1.4 | | | | |
| 2202322000 | 22B | Rhubarb | 0.050419 | 0.700 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=4; Celery; N; PCT=70% | | | | |
| 2302358000 | 23B | Starfruit | 3.000000 | 1.000 | 0.000 | A0: T= |
| | | Full comment: A0: T=3; No PDP Data; PCT=100% | | | | |
| 2401211000 | 24A | Lychee | 15.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=15; No PDP Data; PCT=100% | | | | |
| 2401212000 | 24A | Lychee, dried | 15.000000 | 1.000 | 4.000 | A0: T= |
| | | Full comment: A0: T=15; No PDP Data; PCT=100%; PF=4 | | | | |
| 2402023000 | 24B | Banana | 0.002019 | 1.000 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=0.5; Banana; N/P; PCT=100% | | | | |
| 2402023001 | 24B | Banana-babyfood | 0.002019 | 1.000 | 1.000 | A3.1: |
| | | Full comment: A3.1: Banana; T=0.5; N/P; PCT=100% | | | | |
| 2402024000 | 24B | Banana, dried | 0.002019 | 1.000 | 4.800 | A3.2: |
| | | Full comment: A3.2: T=0.5; Banana; B; PCT=100%; PF=4.8 | | | | |
| 2402024001 | 24B | Banana, dried-babyfood | 0.002019 | 1.000 | 4.800 | A3.2: |
| | | Full comment: A3.2: T=0.5; Banana; B; PCT=100%; PF=4.8 | | | | |
| 2402215000 | 24B | Mango | 0.002500 | 1.000 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=1; Mango; N/P; PCT=100% | | | | |

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| 2402215001 | 24B | Mango-babyfood | 0.002500 | 1.000 | 1.000 | A3.1: |
| | | Full comment: A3.1: Mango; T=1; N/P; PCT=100% | | | | |
| 2402216000 | 24B | Mango, dried | 0.002500 | 1.000 | 5.900 | A3.1: |
| | | Full comment: A3.1: T=1; Mango; N/P; PCT=100%; PF=5.9 | | | | |
| 2402217000 | 24B | Mango, juice | 0.002500 | 1.000 | 2.000 | A3.1: |
| | | Full comment: A3.1: T=1; Mango; N/P; PCT=100%; PF=2 | | | | |
| 2402217001 | 24B | Mango, juice-babyfood | 0.002500 | 1.000 | 2.000 | A3.1: |
| | | Full comment: A3.1: T=1; Mango; N/P; PCT=100%; PF=2 | | | | |
| 2402245000 | 24B | Papaya | 0.090000 | 1.000 | 1.000 | A1.1: |
| | | Full comment: A1.1: T=15; Papaya; N/P; PCT=100% | | | | |
| 2402245001 | 24B | Papaya-babyfood | 0.090000 | 1.000 | 1.000 | A3.1: |
| | | Full comment: A3.1: Papaya; T=15; N/P; PCT=100% | | | | |
| 2402246000 | 24B | Papaya, dried | 0.090000 | 1.000 | 8.000 | A3.2: |
| | | Full comment: A3.2: T=15; Papaya; B; PCT=100%; PF=8 | | | | |
| 2402247000 | 24B | Papaya, juice | 0.090000 | 1.000 | 2.000 | A3.1: |
| | | Full comment: A3.1: T=15; Papaya; N/P; PCT=100%; PF=2 | | | | |
| 2402277000 | 24B | Persimmon | 0.004000 | 1.000 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=1.5; Avocado; N; PCT=100% | | | | |
| 2402283000 | 24B | Plantain | 0.002019 | 1.000 | 1.000 | A4.1: |
| | | Full comment: A4.1: T=0.5; Banana; N; PCT=100% | | | | |
| 2402284000 | 24B | Plantain, dried | 0.002019 | 1.000 | 4.800 | A3.2: |
| | | Full comment: A3.2: T=0.5; Banana; B; PCT=100%; PF=4.8 | | | | |
| 2405252000 | 24E | Passionfruit | 3.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=3; No PDP Data; PCT=100% | | | | |
| 2405252001 | 24E | Passionfruit-babyfood | 3.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=3; No PDP Data; PCT=100% | | | | |
| 2405253000 | 24E | Passionfruit, juice | 3.000000 | 1.000 | 2.000 | A0: T= |
| | | Full comment: A0: T=3; No PDP Data; PCT=100%; PF=2 | | | | |
| 2405253001 | 24E | Passionfruit, juice-babyfood | 3.000000 | 1.000 | 2.000 | A0: T= |
| | | Full comment: A0: T=3; No PDP Data; PCT=100% | | | | |
| 3100044000 | 31 | Beef, meat | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100044001 | 31 | Beef, meat-babyfood | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100045000 | 31 | Beef, meat, dried | 0.030000 | 1.000 | 1.920 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100046000 | 31 | Beef, meat byproducts | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100046001 | 31 | Beef, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100047000 | 31 | Beef, fat | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100047001 | 31 | Beef, fat-babyfood | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100048000 | 31 | Beef, kidney | 0.500000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100049000 | 31 | Beef, liver | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3100049001 | 31 | Beef, liver-babyfood | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3200169000 | 32 | Goat, meat | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3200170000 | 32 | Goat, meat byproducts | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3200171000 | 32 | Goat, fat | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3200172000 | 32 | Goat, kidney | 0.500000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3200173000 | 32 | Goat, liver | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3300189000 | 33 | Horse, meat | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400290000 | 34 | Pork, meat | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400290001 | 34 | Pork, meat-babyfood | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400291000 | 34 | Pork, skin | 0.200000 | 1.000 | 1.000 | Tol us |

| | | | | | | |
|------------|-----|--|----------|-------|-------|--------|
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400292000 | 34 | Pork, meat byproducts | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400292001 | 34 | Pork, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400293000 | 34 | Pork, fat | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400293001 | 34 | Pork, fat-babyfood | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400294000 | 34 | Pork, kidney | 0.500000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3400295000 | 34 | Pork, liver | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500339000 | 35 | Sheep, meat | 0.030000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500339001 | 35 | Sheep, meat-babyfood | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500340000 | 35 | Sheep, meat byproducts | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500341000 | 35 | Sheep, fat | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500341001 | 35 | Sheep, fat-babyfood | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500342000 | 35 | Sheep, kidney | 0.500000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3500343000 | 35 | Sheep, liver | 0.200000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600222000 | 36 | Milk, fat | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600222001 | 36 | Milk, fat-baby food/infant formu | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600223000 | 36 | Milk, nonfat solids | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600223001 | 36 | Milk, nonfat solids-baby food/in | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600224000 | 36 | Milk, water | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600224001 | 36 | Milk, water-babyfood/infant form | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 3600225001 | 36 | Milk, sugar (lactose)-baby food/ | 0.100000 | 1.000 | 1.000 | Tol us |
| | | Full comment: Tol used; PDP doesn't incl. 4-hydroxy chl | | | | |
| 8601000000 | 86A | Water, direct, all sources | 1.370000 | 1.000 | 1.000 | EFED- |
| | | Full comment: EFED- Ornamental (36 lb/A/yr max app rate) | | | | |
| 8602000000 | 86B | Water, indirect, all sources | 1.370000 | 1.000 | 1.000 | EFED- |
| | | Full comment: EFED- Ornamental (36 lb/A/yr max app rate) | | | | |
| 9500109000 | O | Cocoa bean, chocolate | 0.050000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.05; No PDP Data; PCT=100% | | | | |
| 9500110000 | O | Cocoa bean, powder | 0.050000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.05; No PDP Data; PCT=100% | | | | |
| 9500115000 | O | Coffee, roasted bean | 0.200000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=100% | | | | |
| 9500116000 | O | Coffee, instant | 0.200000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.2; No PDP Data; PCT=100% | | | | |
| 9500263000 | O | Peanut | 0.300000 | 0.750 | 1.000 | A0: T= |
| | | Full comment: A0: T=0.3; No PDP Data; PCT=75% | | | | |
| 9500264000 | O | Peanut, butter | 0.012487 | 1.000 | 1.000 | A1.2: |
| | | Full comment: A1.2: T=0.3; PeanutButter; B; PCT=100%; PF=1.2 | | | | |
| 9500265000 | O | Peanut, oil | 0.012487 | 1.000 | 1.000 | A3.3: |
| | | Full comment: A3.3: T=0.3; PeanutButter; B; PCT=100% | | | | |
| 9500275000 | O | Peppermint | 2.000000 | 1.000 | 1.000 | A0: T= |
| | | Full comment: A0: T=2; No PDP Data; PCT=100% | | | | |
| 9500352000 | O | Spearmint | 2.000000 | 1.000 | 0.000 | A0: T= |
| | | Full comment: A0: T=2; No PDP Data; PCT=100% | | | | |
| 9500353000 | O | Spearmint, oil | 2.000000 | 1.000 | 0.000 | A0: T= |
| | | Full comment: A0: T=2; No PDP Data; PCT=100% | | | | |

Attachment 4: DEEM-FCID Chronic Analysis Results.

Evaluation Copy Ver. 4.02, 05-10-c
 DEEM-FCID Chronic analysis for CHLOROTHALONIL NHANES 2005-2010 2-day
 Residue file name: M:\\$\$\$\$\$chlorothalonil\CHLOROTHALONIL_CHRONIC.R10
 Adjustment factor #2 NOT used.
 Analysis Date 07-12-2022/15:03:44 Residue file dated: 07-12-2022/14:57:19
 Reference dose (RfD, Chronic) = .02 mg/kg bw/day

=====

Total exposure by population subgroup

| Population Subgroup | Total Exposure | |
|---------------------|----------------------|-------------------|
| | mg/kg body wt/day | Percent of Rfd |
| ----- | | |
| Total US Population | 0.029010 | 145.1% |
| Hispanic | 0.028529 | 142.6% |
| Non-Hisp-White | 0.029658 | 148.3% |
| Non-Hisp-Black | 0.023336 | 116.7% |
| Non-Hisp-Other | 0.034672 | 173.4% |
| Nursing Infants | 0.032078 | 160.4% |
| Non-Nursing Infants | 0.138130 | 690.7% |
| Female 13+ PREG | 0.029859 | 149.3% |
| Children 1-6 | 0.036857 | 184.3% |
| Children 7-12 | 0.023656 | 118.3% |
| Male 13-19 | 0.019292 | 96.5% |
| Female 13-19/NP | 0.021641 | 108.2% |
| Male 20+ | 0.026773 | 133.9% |
| Female 20+/NP | 0.029548 | 147.7% |
| Seniors 55+ | 0.027016 | 135.1% |
| All Infants | 0.104771 | 523.9% |
| Female 13-50 | 0.028182 | 140.9% |
| Children 1-2 | 0.043247 | 216.2% |
| Children 3-5 | 0.033927 | 169.6% |
| Children 6-12 | 0.024852 | 124.3% |
| Youth 13-19 | 0.020503 | 102.5% |
| Adults 20-49 | 0.028543 | 142.7% |
| Adults 50-99 | 0.027856 | 139.3% |
| Female 13-49 | 0.028046 | 140.2% |
| ----- | | |

Attachment 5: DEEM-FCID Critical Commodity Contribution Analysis for All Infants (<1 year old).

Evaluation Copy Ver. 4.02, 05-10-c
 DEEM-FCID Chronic analysis for CHLOROTHALONIL NHANES 2005-2010 2-day
 Residue file name: M:\\$\$\$\$\$\$chlorothalonil\CHLOROTHALONIL_CHRONIC.R10
 Adjustment factor #2 NOT used.
 Analysis Date 07-12-2022/15:28:15 Residue file dated: 07-12-2022/14:57:19
 Reference dose (RfD, Chronic) = .02 mg/kg bw/day

Critical Commodity Contribution Analysis for All Infants

Total Exposure = .1047713 mg/kg bw/day

Crop groups with total exposure contribution > 15%
 Foods/Foodforms with exposure contribution > 10%

| Crop group Food Foodform | -----Exposure Analysis----- | | |
|--|-----------------------------|------------------------|-------------------|
| | mg/kg body wt/day | % of Total Exposure | Percent of RfD |
| ----- | | | |
| Crop Group = (86) Water | | | |
| Water, indirect, all sources (8602000000): | | | |
| FoodForm N/S | 0.0969317 | 92.52% | 484.66% |
| ----- | | | |
| Total for crop group | 0.1033966 | 98.69% | 516.98% |
| | | | |
| Crop Group = (86B) Indirect Water | | | |
| Water, indirect, all sources (8602000000): | | | |
| FoodForm N/S | 0.0969317 | 92.52% | 484.66% |
| ----- | | | |
| Total for crop group | 0.0969317 | 92.52% | 484.66% |
| | | | |
| Total for crop groups listed above: | 0.1033966 | 98.69% | 517.0% |
| ----- | | | |

Attachment 6: SLUA October 21, 2020.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C., 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 21, 2020

MEMORANDUM

SUBJECT: Chlorothalonil (081901) Screening Level Usage Analysis (SLUA)

FROM: Rachel Fovargue, Biologist
Science Information and Analysis Branch
Biological and Economic Analysis Division (7503P)

A handwritten signature in blue ink, likely belonging to Rachel Fovargue, is positioned to the right of the 'FROM' field.

THRU: Hope Johnson, Chief
Science Information and Analysis Branch
Biological and Economic Analysis Division (7503P)

A handwritten signature in blue ink, likely belonging to Hope Johnson, is positioned to the right of the 'THRU' field.

TO: Jonathan Williams, Chemical Review Manager
Risk Management and Implementation Branch II
Pesticide Re-evaluation Division (7508P)

This memorandum transmits an update of the Screening Level Usage Analysis (SLUA) report for chlorothalonil (last update September 2018). This updated SLUA dated October 2020 shows an uptick in usage for the following major use sites: almonds, and peanuts. Alternatively, corn shows a decline in usage. Blueberries, brussels sprouts, eggplant, honeydew, nectarine and pecans were added to the SLUA. Other use sites show very small or no usage changes in this October 2020 SLUA when compared to the last September 2018 SLUA. Finally, due to reporting inconsistencies at the county level in California, percent crop treated (PCT) calculated from California Department of Pesticide Regulation (CDPR) data has been withheld for many sites. PCTs for specific California crops and time periods may be available upon request, subject to availability and data quality considerations.

This SLUA report is divided into three sections as follows to facilitate your use of the information presented:

- **Coversheet** – a description of the SLUA, the assumptions, data sources and limitations
- **SLUA Data**– usage data estimates (average annual pounds a.i. applied and average and maximum percent crop treated) for each surveyed crop

- *SLUA Appendix A* – listing of crops that are not surveyed for any chemical by our data sources

cc: Katherine Stebbins, Steve Jarboe, Lindsey Hendrick

Chlorothalonil, October 2020 (1)

Chlorothalonil (081901)
Screening Level Usage Analysis (SLUA)
October 15, 2020

What is a Screening Level Usage Analysis (SLUA)?

- A summary of U.S. usage for a pesticidal active ingredient by **agricultural** crop from 2008 to 2018.
- The information presented is not proprietary, business confidential, or trade secret.

What does it contain?

- Pesticide usage statistics for a **single active ingredient** only.
- Available U.S., **national summary** statistics for pesticide usage information **by crop**.
- **Average pounds of active ingredient applied** – Annual average pounds of the pesticide reported applied for each agricultural crop (i.e., for **surveyed states**, not for the entire United States). Values are calculated by merging pesticide usage data sources together; averaging across all observations within a year for each data source, averaging across data sources within years, averaging across year, and then rounding. Any surveyed year without reported usage for the AI is included as a value of zero pounds applied in the calculation of the average. Values are rounded using common rounding rules (i.e., the half round up method). *Note: If the estimated value is less than 500, then that value is labeled <500. Estimated values between 500 & <1,000,000 are rounded to 1 place value. Estimated values of 1,000,000 or greater are rounded to the hundred thousands' place value. (Examples: 478 would be reported as "<500"; 43,873 would be reported as "40,000"; 47,873,901 would be reported as "47,900,000")*
- **Average percent of crop treated** - Values are calculated by merging data sources together; averaging by year, averaging across all years, & **rounded up** to the nearest multiple of 5. *Note: If the estimated value is less than 1, then the value is labeled <1. If the estimated value is less than 2.5, then the value is labeled <2.5.*
- **Maximum percent of crop treated** - Value is the single maximum annual average value reported across all data sources, across all years. The value is **rounded up** to the nearest multiple of 5. *Note: If the estimated value is less than 2.5, then the value is labeled <2.5.*

What are the data sources used?

- United States Department of Agriculture's National Agricultural Statistics Service (USDA-NASS)- pesticide usage data from 2009 to 2018. (available at <https://quickstats.nass.usda.gov/>)
- Kynetec USA, Inc. (Kynetec) – pesticide usage data from 2009 to 2018 from The AgroTrak Study.
- California Department of Pesticide Regulation Pesticide Use Reporting (CDPR) data for 2008 to 2017. (available at <http://www.cdpr.ca.gov/docs/pur/purmain.htm>)

What should I consider when interpreting the reported data?

- The surveys sample from enough states to represent 80% or more of the crop production, in most cases. In rare cases, the survey may sample fewer states than required to reach 80% of the crop production; such deviations are based on the scope of the survey and availability of resources.
- Usage statistics are included only for surveyed crops with reported, quantitative use of the active ingredient during the sampling period.
- Lack of reported usage data for the pesticide on a crop **does not imply** zero usage. There are several reasons for this. As with any sampling data, it is possible some usage may be overlooked. Also, even if usage is noted in data sources, it may **not be quantified**. In such instances, site and associated usage are **not reported** in the SLUA.
- Additional registered uses may exist but are not included because the available surveys neither collect, nor report, usage for those crops (e.g., small acreage crops).
- Seed treatment data are no longer available and are not included in this report.
- Non-agricultural use sites (e.g., turf, post-harvest, mosquito control, etc.) are not reported in the SLUA. A separate request must be made to receive these estimates.
- Some sites have reported usage without a registered FIFRA Section 3 use. This usage could be due to various factors, including, but not limited to Section 18 requests, existing stocks of the chemical, data collection errors, and experimental use permits (EUPs).

Chlorothalonil, October 2020 (2)

Screening Level Estimates of Agricultural Uses of Chlorothalonil (081901)
Sorted Alphabetically
Reporting Years: 2008-2018
October 15, 2020

| | Crop | Annual Average | Percent Crop Treated | |
|----|----------------------------------|-------------------|----------------------|---------|
| | | Lbs. A.I. Applied | Average | Maximum |
| 1 | Almonds | 500,000 | 20 | 30 |
| 2 | Apples ⁺ [^] | 5,000 | <1 | <2.5 |
| 3 | Apricots* | 2,000 | 10 | 15 |
| 4 | Asparagus | 50,000 | 40 | 50 |
| 5 | Beans (Snap, Bush, Pole, String) | 200,000 | 25 | 35 |
| 6 | Blueberry | 20,000 | 10 | 15 |
| 7 | Broccoli | 4,000 | 5 | 10 |
| 8 | Brussels sprout* | 5,000 | 15 | 35 |
| 9 | Cabbage | 100,000 | NC | NC |
| 10 | Cantaloupes | 30,000 | 15 | 25 |
| 11 | Carrots | 80,000 | 35 | 45 |
| 12 | Cauliflower | 1,000 | <2.5 | 10 |
| 13 | Celery | 60,000 | 70 | 90 |
| 14 | Cherries | 400,000 | 35 | 40 |
| 15 | Corn | 30,000 | <1 | <2.5 |
| 16 | Cucumbers | 300,000 | 70 | 80 |
| 17 | Dry Beans/Peas | 30,000 | <2.5 | <2.5 |
| 18 | Eggplant | <500 | 10 | 35 |
| 19 | Garlic | 4,000 | 5 | 20 |
| 20 | Hazelnuts | 30,000 | 30 | 55 |
| 21 | Honeydew | (D) | (D) | (D) |
| 22 | Lima Beans | 5,000 | 5 | 20 |
| 23 | Nectarine* | 2,000 | NC | NC |
| 24 | Onions | 200,000 | 50 | 60 |
| 25 | Peaches | 100,000 | 30 | 35 |
| 26 | Peanuts | 3,700,000 | 75 | 80 |
| 27 | Pecans ⁺ [^] | 3,000 | <1 | <2.5 |
| 28 | Peppers | 40,000 | 20 | 30 |
| 29 | Pistachios | 2,000 | <1 | 10 |
| 30 | Plums/Prunes | 80,000 | 35 | 45 |
| 31 | Potatoes | 2,400,000 | 70 | 75 |
| 32 | Pumpkins | 200,000 | 60 | 70 |
| 33 | Soybeans | 20,000 | <1 | <2.5 |
| 34 | Squash | 100,000 | 60 | 70 |
| 35 | Strawberries | <500 | <1 | <2.5 |

Continued on next page

Chlorothalonil, October 2020 (3)

| | | | | |
|----|-----------------------------|---------|----|------|
| 36 | Sugar Beets [^] | <500 | <1 | <2.5 |
| 37 | Sweet Corn | 60,000 | 5 | 10 |
| 38 | Tomatoes | 500,000 | 55 | 65 |
| 39 | Walnut ^{+^} | <500 | <1 | <2.5 |
| 40 | Watermelons | 300,000 | 65 | 70 |
| 41 | Wheat, Spring ^{+^} | <500 | <1 | <2.5 |
| 42 | Wheat, Winter ^{+^} | 1,000 | <1 | <2.5 |

All numbers are rounded to one significant digit, except those over 1 million, which are rounded to the hundred thousands' place.

<500: less than 500 pounds of active ingredient applied.

<2.5: less than 2.5 percent of crop is treated.

<1: less than 1 percent of crop is treated.

* Based on CDPR data only (80% or more of U.S. acres grown are in California)

NC: not calculated, only pounds AI applied available. Due to reporting inconsistencies across CA counties, PCTs calculated from CDPR data are being withheld. PCTs for specific California crops and time periods may be available upon request, subject to availability and data quality considerations.

D: information is withheld by USDA-NASS to avoid disclosing data for individual farms (USDA-NASS)

+ Site is not known to be listed on active end use product registrations or Section 18 emergency exemptions at the time of this report.

[^] Site registered for ornamental, seed crop, or other non-food use

These results reflect amalgamated data developed by the Agency and are releasable to the public.

Attachment 7: Notes on PDP Data for Chlorothalonil.

October 26, 2020

Notes on PDP Data for Chlorothalonil

Steve Nako

PDP Utility was queried for the Chlorothalonil dietary risk assessment (DRA). PDP data for Chlorothalonil is available from 1994 through 2018. The current toxicological parameters are: Pesticide (PDP Pestcodes): Chlorothalonil 180.275 (164)

Acute (Children): N/A

Chronic: cPoD=2 mg/kg/day, cPAD=0.02 mg/kg/day

BEAD SLUA: October 21, 2020

PDP Outputs for Acute DRA. Acute DRA is not required.

PDP Outputs for Chronic DRA. The Chronic R08 file and preliminary results also included in Excel file (tabs=Chronic_Results, Chronic_RACFF).

DEEM R08 Files. The PDP Utility creates DEEM acute and chronic R08 files. While PDP generates data for many commodities, the PDP Utility creates R08 files using only the data for commodities currently having tolerances. The PDP Utility sets the Adjustment Factor 2 values equal to '0' (AF2=0) for commodities having tolerances but not directly sampled (e.g., lima beans) or not covered at all (e.g., soybeans). This is intended to serve two purposes. First, it allows users to assess dietary exposures based on only PDP data. If dietary risks exceed some level of concern based only on commodities having direct PDP data, then that would be useful to know and to identify those real contributions; adding residue inputs from other foods will only worsen that result. Second, it flags the risk assessor to review the inputs for those commodities without direct matching PDP data or no data at all. E.g., PDP has chlorothalonil data on green beans which may be translated to lima beans; users should decide if the translation is desirable, make any modifications to PCT if necessary. For green beans-fresh, the mean residue is equal to $0.025361 = 0.142175 \times 0.25$ (tab=STAT2, column N: "RES_meanPCT_Totals"). The Default residue (=mean residue for 'treated samples'), and AF1 (=Mean PCT). For lima beans, simply replace the AF1 from 0.25 to 0.05 to account for differences in mean PCT, per BEAD SLUA (5% v 25%). For commodities with no matching PDP data (e.g., A0: PDP did not collect data for soybeans), risk assessors should check to see if better data are available. If better data are available and refinements are needed, then users can make appropriate modifications using the DEEM Residue Editor. **Users should check and confirm residue inputs for all RACs with AF2=0, then reset values to 1.**

The following bullets highlight a preliminary inspection the PDP data used to create the DEEM inputs:

- **Prelim Acute Results (PDP commodities)** NA
- **Prelim Chronic Results (PDP commodities)** Chronic dietary exposures appear to be lower than the aPAD for all age groups (<1% aPAD for commodities with PDP data (apply AF2), and <10% aPAD for all commodities)
- **General** PDP found many detects of chlorothalonil in several different commodities, including cucumbers (219/1510), tomatoes (209/1481), green beans (192/1438), celery (107/348). Most detects were well below the corresponding tolerances.

- **Exceedances:** PDP detected chlorothalonil in 2 samples of fresh green beans at 5.6 ppm and 9.1 ppm, both exceeding the tolerance of 5 ppm. CS exposures were not relevant since there is no acute endpoint. Following HED policy, those 2 residue values were excluded in the calculation of mean residues. The chronic exposure estimates were not qualitatively affected by removing those data.
- **Contributors based on PDP data:** Milk and green beans provide relatively high contributions. PDP did not detect chlorothalonil in milk; $\frac{1}{2}$ LODs were relatively low (1.5-2.5 ppb), relative contributions are due to high milk consumption. As indicated above, PDP frequently detected chlorothalonil in green beans; the % detects fluctuate (8% to 36%), but the recent 2007/08 data are comparable to earlier years. PDP did not detect chlorothalonil in 1723 samples of canned green beans, nor 1227 samples of frozen beans.
- **Contributors based on non-PDP data (Tolerances):** Cabbage and soybeans provide relatively large contributions if we include residues based on the corresponding inputs. PDP did not analyze for chlorothalonil in any cabbage samples; it did for broccoli (13 detects, 1435 samples).
- **DW** Between 2002 and 2013, PDP sampled various water sources; Chlorothalonil was detected in 1 ground water sample (1/1817) at 3.2 ppb; it was not detected in bottled water (0/745) nor finished water (0/1204)
- **Misc-Collards & Kale.** PDP also detected chlorothalonil on 5 samples of collards and 3 samples of kale. You can consider this as misuse since Chlorothalonil has tolerance on Crop Group 5A, but these commodities are in CG 5B. I found these data peculiar since PDP did not report other samples with no detects.

Based on my brief review of these Chlorothalonil PDP data adding and/or removing years of data for various commodities is unlikely to have qualitatively impact the DRA.

Attachment 8: Acute Dietary Assessment for Chlorothalonil Metabolite SDS-3701

During the evaluation of previously submitted and reviewed data, HED discovered that the SDS-3701 metabolite appears to be much more toxic than chlorothalonil (D463742, R. Loudon *et al.*, 27-SEP-2023). Increased early resorptions were observed in the prenatal rat study for the SDS-3701 metabolite at 15 mg/kg/day (NOAEL = 5 mg/kg/day). The acute dietary endpoint for chlorothalonil, which is also based on early resorptions observed in the chlorothalonil prenatal rat study at 400 mg/kg/day (NOAEL = 100 mg/kg/day) is therefore not protective of the early resorptions observed for the SDS-3701 metabolite. As a result, an acute dietary endpoint (females 13-49 years of age) for SDS-3701 has been selected as shown in the Table A8.1.

| Table A8.1. Endpoint Selection Table for SDS-3701 Metabolite for Use in Dietary Human Health Risk Assessments. | | | | |
|---|---------------------|--|---|---|
| Exposure/ Scenario | POD | Uncertainty/FQPA Safety Factors | RfD, PAD, LOC for Risk Assessment | Study and Toxicological Effects |
| Acute Dietary (Females 13-49 years of age) | NOAEL = 5 mg/kg/day | UF _A = 10X UF _H = 10X FQPA SF = 1X | Acute RfD = 0.05 mg/kg/day aPAD = 0.05 mg/kg/day | Rat Developmental (MRID 45331001) Developmental LOAEL = 15 mg/kg/day based on increased early resorptions ¹ . |

¹ Other effects were observed at the LOAEL; however, they are not considered attributable to a single dose/considered an acute effect.

Point of departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no-observed adverse-effect level. LOAEL = lowest-observed adverse-effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. aPAD = acute population-adjusted dose. RfD = reference dose. LOC = level of concern.

Additionally, the chronic dietary endpoint was examined to determine if the selected chronic POD for chlorothalonil was protective of effects in the SDS-3701 database. The chronic dietary endpoint for chlorothalonil is currently set at 4 mg/kg/day based on kidney effects observed in the chronic/carcinogenicity study in rats, with a NOAEL of 2 mg/kg/day. Two SDS-3701 studies (the prenatal rabbit and chronic dog studies) had similar, but slightly lower NOAEL/LOAEL values than the chlorothalonil chronic/carcinogenicity rat study. However, according to allometric (3/4 body weight) scaling between these studies, all NOAELs/LOAELs were nearly equivalent. Additionally, the chronic POD of 2.0 mg/kg/day was considered to be protective of effects observed in the two-generation reproduction study in rats for SDS-3701 at 3.0 mg/kg/day. Therefore, HED has concluded that the current chronic dietary POD for chlorothalonil is protective of chronic toxicity from SDS-3701.

Food Residues: A partially refined acute dietary (food and drinking water) exposure and risk assessment was conducted for SDS-3701 assuming 100 PCT, HED default processing factors, maximum field trial residues for some crops (Table A8.2), and tolerance-level residues for most food commodities. Tolerance-level residues were used for livestock commodities as the residue of concern in meat and milk is 4-hydroxy chlorothalonil (SDS-3701). For the crop commodities, field trial data show that, when detected, 4-hydroxy chlorothalonil residues were generally far less than 5% of the chlorothalonil residue. Therefore, as a conservative estimate, for crops with

quantifiable residues, a value of 10% of the tolerance level was used (see Attachment A8.1). For crops without quantifiable residues, the tolerance value level (i.e., LOQ) was used.

| Table A8.2. Maximum Field Trial Resides for SDS-3701. | | |
|--|---------------------|--|
| Crop | Max. SDS-3701 (ppm) | MRID# |
| Non-Bell Peppers | 0.031 | 48691301 |
| Cabbage | 0.03 | 42875920-22 |
| Strawberry | 0.01 | 47840001 |
| Bell Peppers | 0.01 | 47248501 |
| Tomato | 0.0716 | AR for Chlorothalonil from D208333 (W. Smith, 13-JUN-1995) |

Processing Factors: The acute dietary exposure assessment assumed HED default processing factors.

Drinking Water: For groundwater, the majority of the residues are SDS-3701 with about 1/3 to ¼ of the rest as the other residues of concern (e-mail, Sheng Lin, May 2, 2022). The upper bound estimate was used to derive the EDWC values of 1.167 ppm (1.556 ppm for TTR x 0.75).

Results/Discussion: A partially refined acute dietary (food and drinking water) exposure and risk assessment was conducted assuming 100 PCT, HED default processing factors, maximum field trial resides for some crops, and tolerance-level residues for most food commodities. Drinking water was incorporated directly into the dietary assessment and used the Tier 2 highest daily value for groundwater concentrations updated with 2-meter subsurface degradation. The resulting acute dietary (food plus drinking water) risk estimate is above HED's level of concern (>100% aPAD) at the 95th percentile of the exposure. The acute dietary (food plus drinking water) risk for the females 13 to 49 years old is 130% of the aPAD (Table A8.3). Based on the critical commodity contribution analysis, the estimated acute dietary risk from drinking water alone is 120% of the aPAD (Attachment A8.3). No appropriate toxicological effect attributable to a single dose was observed for the U.S. population or any other population subgroup. HED also has concluded that the current chronic dietary POD for chlorothalonil is protective of chronic toxicity from SDS-3701; therefore, a separate chronic dietary assessment was not required.

| Table A8.3. Summary of Dietary (Food + Drinking Water) Exposure and Risk for SDS-3701. | | |
|---|------------------------------|------------|
| Population Subgroup | Acute Dietary | |
| | Dietary Exposure (mg/kg/day) | % aPAD |
| General U.S. Population | N/A | N/A |
| All Infants (<1 year old) | | |
| Children 1-2 years old | | |
| Children 3-5 years old | | |
| Children 6-12 years old | | |
| Youth 13-19 years old | | |
| Adults 20-49 years old | | |
| Adults 50-99 years old | | |
| Females 13-49 years old | 0.062687 | 130 |

The highest exposure/risk estimate for each duration is bolded.

Conclusions: A partially refined acute dietary (food and drinking water) exposure and risk assessment was conducted for chlorothalonil metabolite SDS-3701 assuming 100 PCT, HED default processing factors, maximum field trial residues for some crops, and tolerance-level residues for most food commodities. The resulting acute dietary (food plus drinking water) risk estimate is above HED's level of concern ($>100\%$ aPAD) at the 95th percentile of the exposure. The acute dietary (food plus drinking water) risk for the females 13 to 49 years old is 130% of the aPAD. Based on the critical commodity contribution analysis, the estimated acute dietary risk from drinking water alone is 120% of the aPAD. HED is confident that the assessment does not underestimate risk to the females 13 to 49 years old population subgroup.

List of Attachments

Attachment A8.1: DEEM-FCID Acute Food + Drinking Water Residue Input File.

Attachment A8.2: DEEM-FCID Acute Dietary Analysis Results.

Attachment A8.3: DEEM-FCID Crit. Com. Contribution Analysis for Females 13 to 49 Years Old.

Attachment A8.1: DEEM-FCID Acute Food + Drinking Water Residue Input File.

Filename: C:\Users\gkramer\OneDrive - Environmental Protection Agency

(EPA)\Gk\\$\$\$\$Chlorothalonil\SDS-3701_ACUTE inputs.TXT

Chemical: Chlorothalonil

RfD(Chronic): .02 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day

RfD(Acute): .05 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day

Date created/last modified: 07-27-2022/15:55:58 Program ver. 4.02, 05-10-c

Comment: Values taken from FR 66(48):14330-14442, Mar 12, 2001

| EPA Code | Crop Grp | Commodity Name | Def Res (ppm) | Adj.Factors #1 | Adj.Factors #2 | Comment |
|------------|----------|------------------------------------|---------------|----------------|----------------|---------|
| 0101078000 | 1AB | Carrot | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101078001 | 1AB | Carrot-babyfood | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101079000 | 1AB | Carrot, juice | 0.100000 | 0.140 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101168000 | 1AB | Ginseng, dried | 0.400000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101190000 | 1AB | Horseradish | 0.400000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101251000 | 1AB | Parsnip | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0101251001 | 1AB | Parsnip-babyfood | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103296000 | 1C | Potato, chips | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103297000 | 1C | Potato, dry (granules/ flakes) | 0.030000 | 6.500 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103297001 | 1C | Potato, dry (granules/ flakes)-b | 0.030000 | 6.500 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103298000 | 1C | Potato, flour | 0.030000 | 6.500 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103298001 | 1C | Potato, flour-babyfood | 0.030000 | 6.500 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103299000 | 1C | Potato, tuber, w/peel | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103299001 | 1C | Potato, tuber, w/peel-babyfood | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103300000 | 1C | Potato, tuber, w/o peel | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103300001 | 1C | Potato, tuber, w/o peel-babyfood | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0103406000 | 1CD | Yam, true | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301165000 | 3A | Garlic, bulb | 0.150000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301165001 | 3A | Garlic, bulb-babyfood | 0.150000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301237000 | 3A | Onion, bulb | 0.150000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301237001 | 3A | Onion, bulb-babyfood | 0.150000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301238000 | 3A | Onion, bulb, dried | 0.150000 | 9.700 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301238001 | 3A | Onion, bulb, dried-babyfood | 0.150000 | 9.700 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0301338000 | 3A | Shallot, bulb | 0.150000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0302198000 | 3B | Leek | 1.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0302239000 | 3B | Onion, green | 1.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0302338500 | 3B | Shallot, fresh leaves | 1.000000 | 1.000 | 1.000 | 0.1X t |

| | | | | | | |
|------------|----|--|----------|-------|-------|--------|
| 0402062000 | 4B | Full comment: 0.1X tolerance level Broccoli, Chinese | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0500061000 | 5 | Full comment: 0.1X tolerance level Broccoli | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0500061001 | 5 | Full comment: 0.1X tolerance level Broccoli-babyfood | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0500064000 | 5 | Full comment: 0.1X tolerance level Brussels sprouts | 0.600000 | 1.000 | 1.000 | 0.1X t |
| 0500069000 | 5 | Full comment: 0.1X tolerance level Cabbage | 0.030000 | 1.000 | 1.000 | FT res |
| 0500071000 | 5 | Full comment: FT residue Cabbage, Chinese, napa | 0.030000 | 1.000 | 1.000 | FT res |
| 0500072000 | 5 | Full comment: FT residue Cabbage, Chinese, mustard | 0.030000 | 1.000 | 1.000 | FT res |
| 0500083000 | 5 | Full comment: 0.1X tolerance level Cauliflower | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0600347000 | 6 | Full comment: 0.1X tolerance level Soybean, seed | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 0600348000 | 6 | Full comment: 0.1X tolerance level Soybean, flour | 0.020000 | 2.200 | 1.000 | 0.1X t |
| 0600348001 | 6 | Full comment: 0.1X tolerance level Soybean, flour-babyfood | 0.020000 | 2.200 | 1.000 | 0.1X t |
| 0600349000 | 6 | Full comment: 0.1X tolerance level Soybean, soy milk | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 0600349001 | 6 | Full comment: 0.1X tolerance level Soybean, soy milk-babyfood or in | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 0600350000 | 6 | Full comment: 0.1X tolerance level Soybean, oil | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 0600350001 | 6 | Full comment: 0.1X tolerance level Soybean, oil-babyfood | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 0601043000 | 6A | Full comment: 0.1X tolerance level Bean, snap, succulent | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0601043001 | 6A | Full comment: 0.1X tolerance level Bean, snap, succulent-babyfood | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0601257000 | 6A | Full comment: 0.1X tolerance level Pea, edible podded, succulent | 0.500000 | 1.000 | 1.000 | 0.1X t |
| 0603030000 | 6C | Full comment: 0.1X tolerance level Bean, black, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603032000 | 6C | Full comment: 0.1X tolerance level Bean, broad, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603034000 | 6C | Full comment: 0.1X tolerance level Bean, cowpea, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603035000 | 6C | Full comment: 0.1X tolerance level Bean, great northern, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603036000 | 6C | Full comment: 0.1X tolerance level Bean, kidney, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603038000 | 6C | Full comment: 0.1X tolerance level Bean, lima, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603039000 | 6C | Full comment: 0.1X tolerance level Bean, mung, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603040000 | 6C | Full comment: 0.1X tolerance level Bean, navy, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603041000 | 6C | Full comment: 0.1X tolerance level Bean, pink, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603042000 | 6C | Full comment: 0.1X tolerance level Bean, pinto, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603098000 | 6C | Full comment: 0.1X tolerance level Chickpea, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603098001 | 6C | Full comment: 0.1X tolerance level Chickpea, seed-babyfood | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603099000 | 6C | Full comment: 0.1X tolerance level Chickpea, flour | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603182000 | 6C | Full comment: 0.1X tolerance level Guar, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| 0603182001 | 6C | Full comment: 0.1X tolerance level Guar, seed-babyfood | 0.010000 | 1.000 | 1.000 | 0.1X t |

| | | | | | | |
|------------|-----|--|----------|--------|-------|--------|
| 0603203000 | 6C | Lentil, seed | 0.010000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0801374000 | 8A | Tomatillo | 0.071600 | 1.000 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801375000 | 8A | Tomato | 0.071600 | 1.000 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801375001 | 8A | Tomato-babyfood | 0.071600 | 1.000 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801376000 | 8A | Tomato, paste | 0.071600 | 5.400 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801376001 | 8A | Tomato, paste-babyfood | 0.071600 | 5.400 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801377000 | 8A | Tomato, puree | 0.071600 | 3.300 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801377001 | 8A | Tomato, puree-babyfood | 0.071600 | 3.300 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801378000 | 8A | Tomato, dried | 0.071600 | 14.300 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801378001 | 8A | Tomato, dried-babyfood | 0.071600 | 14.300 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0801379000 | 8A | Tomato, juice | 0.071600 | 1.000 | 1.000 | AR for |
| | | Full comment: AR for Chlorothalonil from D208333 | | | | |
| 0802148000 | 8BC | Eggplant | 0.700000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0802234000 | 8BC | Okra | 0.700000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0802270000 | 8B | Pepper, bell | 0.010000 | 1.000 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802270001 | 8B | Pepper, bell-babyfood | 0.010000 | 1.000 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802271000 | 8B | Pepper, bell, dried | 0.010000 | 13.500 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802271001 | 8B | Pepper, bell, dried-babyfood | 0.010000 | 13.500 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802272000 | 8BC | Pepper, nonbell | 0.031000 | 1.000 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802272001 | 8BC | Pepper, nonbell-babyfood | 0.031000 | 1.000 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0802273000 | 8BC | Pepper, nonbell, dried | 0.031000 | 12.800 | 1.000 | FT res |
| | | Full comment: FT residue | | | | |
| 0901075000 | 9A | Cantaloupe | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0901187000 | 9A | Honeydew melon | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0901399000 | 9A | Watermelon | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0901400000 | 9A | Watermelon, juice | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902021000 | 9B | Balsam pear | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902088000 | 9B | Chayote, fruit | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902102000 | 9B | Chinese waxgourd | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902135000 | 9B | Cucumber | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902308000 | 9B | Pumpkin | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902309000 | 9B | Pumpkin, seed | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902356000 | 9B | Squash, summer | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902356001 | 9B | Squash, summer-babyfood | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902357000 | 9B | Squash, winter | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 0902357001 | 9B | Squash, winter-babyfood | 0.500000 | 1.000 | 1.000 | 0.1X t |

| | | | | | |
|------------|---|----------|-------|-------|--------|
| 1201090000 | Full comment: 0.1X tolerance level 12A Cherry | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1201090001 | Full comment: 0.1X tolerance level 12A Cherry-babyfood | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1201091000 | Full comment: 0.1X tolerance level 12A Cherry, juice | 0.050000 | 1.500 | 1.000 | 0.1X t |
| 1201091001 | Full comment: 0.1X tolerance level 12A Cherry, juice-babyfood | 0.050000 | 1.500 | 1.000 | 0.1X t |
| 1202012000 | Full comment: 0.1X tolerance level 12B Apricot | 0.150000 | 1.000 | 1.000 | 0.1X t |
| 1202012001 | Full comment: 0.1X tolerance level 12B Apricot-babyfood | 0.150000 | 1.000 | 1.000 | 0.1X t |
| 1202013000 | Full comment: 0.1X tolerance level 12B Apricot, dried | 0.150000 | 6.000 | 1.000 | 0.1X t |
| 1202014000 | Full comment: 0.1X tolerance level 12B Apricot, juice | 0.150000 | 1.300 | 1.000 | 0.1X t |
| 1202014001 | Full comment: 0.1X tolerance level 12B Apricot, juice-babyfood | 0.150000 | 1.300 | 1.000 | 0.1X t |
| 1202230000 | Full comment: 0.1X tolerance level 12B Nectarine | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1202260000 | Full comment: 0.1X tolerance level 12B Peach | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1202260001 | Full comment: 0.1X tolerance level 12B Peach-babyfood | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1202261000 | Full comment: 0.1X tolerance level 12B Peach, dried | 0.050000 | 7.000 | 1.000 | 0.1X t |
| 1202261001 | Full comment: 0.1X tolerance level 12B Peach, dried-babyfood | 0.050000 | 7.000 | 1.000 | 0.1X t |
| 1202262000 | Full comment: 0.1X tolerance level 12B Peach, juice | 0.050000 | 1.300 | 1.000 | 0.1X t |
| 1202262001 | Full comment: 0.1X tolerance level 12B Peach, juice-babyfood | 0.050000 | 1.300 | 1.000 | 0.1X t |
| 1203285000 | Full comment: 0.1X tolerance level 12C Plum | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 1203285001 | Full comment: 0.1X tolerance level 12C Plum-babyfood | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 1203286000 | Full comment: 0.1X tolerance level 12C Plum, prune, fresh | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 1203286001 | Full comment: 0.1X tolerance level 12C Plum, prune, fresh-babyfood | 0.020000 | 1.000 | 1.000 | 0.1X t |
| 1203287000 | Full comment: 0.1X tolerance level 12C Plum, prune, dried | 0.020000 | 5.000 | 1.000 | 0.1X t |
| 1203287001 | Full comment: 0.1X tolerance level 12C Plum, prune, dried-babyfood | 0.020000 | 5.000 | 1.000 | 0.1X t |
| 1203288000 | Full comment: 0.1X tolerance level 12C Plum, prune, juice | 0.020000 | 1.400 | 1.000 | 0.1X t |
| 1203288001 | Full comment: 0.1X tolerance level 12C Plum, prune, juice-babyfood | 0.020000 | 1.400 | 1.000 | 0.1X t |
| 1302057000 | Full comment: 0.1X tolerance level 13B Blueberry | 0.100000 | 1.000 | 1.000 | 0.1X t |
| 1302057001 | Full comment: 0.1X tolerance level 13B Blueberry-babyfood | 0.100000 | 1.000 | 1.000 | 0.1X t |
| 1307130000 | Full comment: 0.1X tolerance level 13G Cranberry | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1307130001 | Full comment: 0.1X tolerance level 13G Cranberry-babyfood | 0.050000 | 1.000 | 1.000 | 0.1X t |
| 1307131000 | Full comment: 0.1X tolerance level 13G Cranberry, dried | 0.050000 | 7.900 | 1.000 | 0.1X t |
| 1307132000 | Full comment: 0.1X tolerance level 13G Cranberry, juice | 0.050000 | 1.200 | 1.000 | 0.1X t |
| 1307132001 | Full comment: 0.1X tolerance level 13G Cranberry, juice-babyfood | 0.050000 | 1.200 | 1.000 | 0.1X t |
| 1400003000 | Full comment: tolerance level 14 Almond | 0.050000 | 1.000 | 1.000 | tolera |
| 1400003001 | Full comment: tolerance level 14 Almond-babyfood | 0.050000 | 1.000 | 1.000 | tolera |

| | | | | | | |
|------------|-----|------------------------------------|----------|-------|-------|--------|
| 1400004000 | 14 | Almond, oil | 0.050000 | 2.800 | 1.000 | tolera |
| | | Full comment: tolerance level | | | | |
| 1400004001 | 14 | Almond, oil-babyfood | 0.050000 | 2.800 | 1.000 | tolera |
| | | Full comment: tolerance level | | | | |
| 1400155000 | 14 | Hazelnut | 0.100000 | 1.000 | 1.000 | tolera |
| | | Full comment: tolerance level | | | | |
| 1400156000 | 14 | Hazelnut, oil | 0.100000 | 1.800 | 1.000 | tolera |
| | | Full comment: tolerance level | | | | |
| 1400282000 | 14 | Pistachio | 0.200000 | 1.000 | 1.000 | tolera |
| | | Full comment: tolerance level | | | | |
| 1500127000 | 15 | Corn, sweet | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 1500127001 | 15 | Corn, sweet-babyfood | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2100228000 | 21 | Mushroom | 0.100000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2201019000 | 22A | Asparagus | 0.010000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2201196000 | 22A | Kohlrabi | 0.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2202085000 | 22B | Celery | 2.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2202085001 | 22B | Celery-babyfood | 2.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2202086000 | 22B | Celery, juice | 2.000000 | 1.400 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2202322000 | 22B | Rhubarb | 0.700000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2302358000 | 23B | Starfruit | 0.300000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2401211000 | 24A | Lychee | 1.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2401212000 | 24A | Lychee, dried | 1.500000 | 4.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402023000 | 24B | Banana | 0.050000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402023001 | 24B | Banana-babyfood | 0.050000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402024000 | 24B | Banana, dried | 0.050000 | 4.800 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402024001 | 24B | Banana, dried-babyfood | 0.050000 | 4.800 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402215000 | 24B | Mango | 1.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402215001 | 24B | Mango-babyfood | 1.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402216000 | 24B | Mango, dried | 1.000000 | 5.900 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402217000 | 24B | Mango, juice | 1.000000 | 2.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402217001 | 24B | Mango, juice-babyfood | 1.000000 | 2.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402245000 | 24B | Papaya | 2.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402245001 | 24B | Papaya-babyfood | 2.000000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402246000 | 24B | Papaya, dried | 2.000000 | 8.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402247000 | 24B | Papaya, juice | 2.000000 | 2.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402277000 | 24B | Persimmon | 1.500000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402283000 | 24B | Plantain | 0.050000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2402284000 | 24B | Plantain, dried | 0.050000 | 4.800 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 2405252000 | 24E | Passionfruit | 0.300000 | 1.000 | 1.000 | 0.1X t |

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|------------|------------------------------------|----------|-------|-------|--------|
| | Full comment: 0.1X tolerance level | | | | |
| 2405252001 | 24E Passionfruit-babyfood | 0.300000 | 1.000 | 1.000 | 0.1X t |
| | Full comment: 0.1X tolerance level | | | | |
| 2405253000 | 24E Passionfruit, juice | 0.300000 | 2.000 | 1.000 | 0.1X t |
| | Full comment: 0.1X tolerance level | | | | |
| 2405253001 | 24E Passionfruit, juice-babyfood | 0.300000 | 2.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100044000 | 31 Beef, meat | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100044001 | 31 Beef, meat-babyfood | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100045000 | 31 Beef, meat, dried | 0.030000 | 1.920 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100046000 | 31 Beef, meat byproducts | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100046001 | 31 Beef, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100047000 | 31 Beef, fat | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100047001 | 31 Beef, fat-babyfood | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100048000 | 31 Beef, kidney | 0.500000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100049000 | 31 Beef, liver | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3100049001 | 31 Beef, liver-babyfood | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3200169000 | 32 Goat, meat | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3200170000 | 32 Goat, meat byproducts | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3200171000 | 32 Goat, fat | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3200172000 | 32 Goat, kidney | 0.500000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3200173000 | 32 Goat, liver | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3300189000 | 33 Horse, meat | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400290000 | 34 Pork, meat | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400290001 | 34 Pork, meat-babyfood | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400291000 | 34 Pork, skin | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400292000 | 34 Pork, meat byproducts | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400292001 | 34 Pork, meat byproducts-babyfood | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400293000 | 34 Pork, fat | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400293001 | 34 Pork, fat-babyfood | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400294000 | 34 Pork, kidney | 0.500000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3400295000 | 34 Pork, liver | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3500339000 | 35 Sheep, meat | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3500339001 | 35 Sheep, meat-babyfood | 0.030000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3500340000 | 35 Sheep, meat byproducts | 0.200000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3500341000 | 35 Sheep, fat | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |
| 3500341001 | 35 Sheep, fat-babyfood | 0.100000 | 1.000 | 1.000 | toler |
| | Full comment: tolerance level | | | | |

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|------------|-----|------------------------------------|----------|-------|-------|--------|
| 3500342000 | 35 | Sheep, kidney | 0.500000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3500343000 | 35 | Sheep, liver | 0.200000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600222000 | 36 | Milk, fat | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600222001 | 36 | Milk, fat-baby food/infant formu | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600223000 | 36 | Milk, nonfat solids | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600223001 | 36 | Milk, nonfat solids-baby food/in | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600224000 | 36 | Milk, water | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600224001 | 36 | Milk, water-babyfood/infant form | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 3600225001 | 36 | Milk, sugar (lactose)-baby food/ | 0.100000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 8601000000 | 86A | Water, direct, all sources | 1.167000 | 1.000 | 1.000 | |
| 8602000000 | 86B | Water, indirect, all sources | 1.167000 | 1.000 | 1.000 | |
| 9500109000 | O | Cocoa bean, chocolate | 0.050000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 9500110000 | O | Cocoa bean, powder | 0.050000 | 1.000 | 1.000 | toler |
| | | Full comment: tolerance level | | | | |
| 9500115000 | O | Coffee, roasted bean | 0.020000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500116000 | O | Coffee, instant | 0.020000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500263000 | O | Peanut | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500264000 | O | Peanut, butter | 0.030000 | 1.200 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500265000 | O | Peanut, oil | 0.030000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500275000 | O | Peppermint | 0.200000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500276000 | O | Peppermint, oil | 0.200000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500352000 | O | Spearmint | 0.200000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |
| 9500353000 | O | Spearmint, oil | 0.200000 | 1.000 | 1.000 | 0.1X t |
| | | Full comment: 0.1X tolerance level | | | | |

Attachment A8.2: DEEM-FCID Acute Dietary Analysis Results.

DEEM-FCID ACUTE Analysis for CHLOROTHALONIL NHANES 2005-2010 2-Day
Residue file: SDS-3701_ACUTE.R10 Adjustment factor #2 used.
Analysis Date: 07-28-2022/09:07:25 Residue file dated: 07-27-2022/15:55:58
RAC/FF intake summed over 24 hours
Run Comment: "Values taken from FR 66(48):14330-14442, Mar 12, 2001"
=====

Summary calculations--per capita:

| | 95th Percentile Exposure | % aRfD | 99th Percentile Exposure | % aRfD | 99.9th Percentile Exposure | % aRfD |
|---------------|-----------------------------|--------|-----------------------------|--------|-------------------------------|--------|
| | ----- | ----- | ----- | ----- | ----- | ----- |
| Female 13-49: | 0.062687 | 125.37 | 0.090835 | 181.67 | 0.134672 | 269.34 |

Attachment A8.3: DEEM-FCID Crit. Com. Contribution Analysis for Females 13 to 49 Years Old.

DEEM-FCID Acute Critical Exposure Contribution Analysis (Ver. 4.02, 05-10-c)
 NHANES 2005-2010 2-Day
 Residue file = C:\Users\gkramer\OneDrive - Environmental Protection Agency
 (EPA)\Gk\SDS-3701_ACUTE.R10
 Date and time of analysis: 07-18-2022 15:45:42
 Daily totals for food and foodform consumption used.
 Adjustment factor #2 used.
 Minimum exposure contribution = 5%
 Exposures divided by body weight

Subpopulations:
 1 Female 13-49

=====

Female 13-49

Low percentile for CEC records: 95 Exposure (mg/day) = 0.062687
 High percentile for CEC records: 99.9 Exposure (mg/day) = 0.134673
 Number of actual records in this interval: 398

Critical foods with foodforms for this population (as derived from these records):

N=number of appearances in all records (including duplicates)

%=percent of total exposure for all records (including duplicates)

| Food | FF | N | Percent | Food Name |
|------------|-----|-----|---------|--|
| 8601000000 | 110 | 385 | 75.67% | Water, direct, all sources-Uncooked; Fresh or N/S; Cook Meth N/S |
| 8602000000 | 232 | 230 | 17.13% | Water, indirect, all sources-Cooked; Dried; Boiled |
| 8602000000 | 230 | 35 | 1.37% | Water, indirect, all sources-Cooked; Dried; Cook Meth N/S |
| 8602000000 | 110 | 28 | 1.09% | Water, indirect, all sources-Uncooked; Fresh or N/S; Cook Meth N/S |
| 8602000000 | 212 | 34 | 0.86% | Water, indirect, all sources-Cooked; Fresh or N/S; Boiled |
| 8602000000 | 130 | 9 | 0.27% | Water, indirect, all sources-Uncooked; Dried; Cook Meth N/S |
| 2402217000 | 240 | 3 | 0.08% | Mango, juice-Cooked; Canned; Cook Meth N/S |
| 8602000000 | 210 | 3 | 0.06% | Water, indirect, all sources-Cooked; Fresh or N/S; Cook Meth N/S |
| 8602000000 | 120 | 3 | 0.05% | Water, indirect, all sources-Uncooked; Frozen; Cook Meth N/S |
| 2402277000 | 110 | 3 | 0.05% | Persimmon-Uncooked; Fresh or N/S; Cook Meth N/S |
| 0901399000 | 110 | 2 | 0.03% | Watermelon-Uncooked; Fresh or N/S; Cook Meth N/S |
| 8602000000 | 242 | 1 | 0.02% | Water, indirect, all sources-Cooked; Canned; Boiled |
| 8602000000 | 211 | 1 | 0.02% | Water, indirect, all sources-Cooked; Fresh or N/S; Baked |
| 8602000000 | 215 | 1 | 0.02% | Water, indirect, all sources-Cooked; Fresh or N/S; Boiled/baked |
| 0500083000 | 212 | 1 | 0.02% | Cauliflower-Cooked; Fresh or N/S; Boiled |
| 8602000000 | 140 | 1 | 0.02% | Water, indirect, all sources-Uncooked; Canned; Cook Meth N/S |
| 8602000000 | 240 | 1 | 0.01% | Water, indirect, all sources-Cooked; Canned; Cook Meth N/S |

Critical foods (without foodforms) for this population (as derived from these records):

N=number of appearances in all records (including duplicates)

%=percent of total exposure for all records (including duplicates)

| Food | N | Percent | Food Name |
|------------|-----|---------|----------------------------|
| 8601000000 | 385 | 75.67% | Water, direct, all sources |

| | | | |
|------------|-----|--------|------------------------------|
| 8602000000 | 347 | 20.92% | Water, indirect, all sources |
| 2402217000 | 3 | 0.08% | Mango, juice |