

Exposure

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This is a discussion paper. It does not reflect the views of the Committee. It should not be cited.

Brief market analysis

181. A brief market analysis was carried out using the search term on Google: “*Garcinia cambogia* buy UK”. This information was collated into Tables 3 and 4. The FSA’s Exposure Assessment Team (EAT) have quality assured this data by reviewing the transcription of the information in the table is correct according to the weblinks.

182. The Holland & Barret website states that “Most studies have been based on 900 mg to 3,000mg of HCA of *garcinia cambogia* daily. Dosage recommendations on commercially available pills are generally lower, around 300mg – 1,600mg daily.” (Holland & Barrett, 2019). At the time of writing, two products (each available in different pack sizes) were available that contained *G. cambogia* in MIDS: *G. cambogia* and green coffee bean capsules (600 mg *G. Cambogia* (fruit) per day (2 capsules)) in 60 or 100 capsule bottles; protein shakes (150 mg *G. cambogia* extract/55g per scoop; instructions state to add 2 scoops per serving and recommends 1-3 servings daily – total of up to 900 mg *G. cambogia* extract/day) in 1 or 2 kg tubs (Holland & Barrett, 2025).

183. Other online retailers such as Amazon, Superdrug, Grape Tree, Natur House and various body building supplement & nutrition websites offer *G. cambogia* capsule products with daily doses of HCA ranging from 80 – 10,000 mg. However, the product description and labelling are inconsistent with some listings simply stating *G. cambogia* extract without describing whether it is HCA nor the standardised HCA content. A powdered product of *G. Cambogia* extract was also available, where half a teaspoon serving gave a dose of 500 mg HCA (60% standardised (Oils and Herbs, 2025). It may be possible that other (non-)UK retailers offer products with higher concentrations of HCA than identified in this discussion paper.

Estimated exposure

184. A comprehensive exposure assessment using consumption data from years 1-11 of the National Diet and Nutrition Survey (NDNS) (Bates et al., 2014; Bates et al., 2016; Roberts et al., 2018; Bates et al., 2020) was not possible, for the following reasons:

- Specific food supplements containing *G. cambogia* are not in the NDNS.
 - Specific food/drink products containing *G. cambogia* are not in the NDNS.
- Whilst consumption estimates for food/drink products containing *G.*

ambogia could be based on consumption of “normal” versions of the food in NDNS, it was noted these products are uncommon; this approach may have resulted in a significant overestimation of exposure.

- The use of the rind for culinary purposes was not in scope for the exposure assessment. In this instance, using the identified dose for use as a supplement was considered the most appropriate approach.

185. Therefore, the exposure estimates provided for the identified products of the market analysis are based on the recommended dose/serving size and the average body weights of adults (aged 19-64 years) and toddlers (aged 1.5-3 years) from the NDNS (78.6 and 14.6 kg, respectively).

186. Most products in the market analysis included warning information that recommended the product was suitable for adults only. However, consumption by other age groups could not be ruled out completely. Therefore, toddlers have been chosen as the age group for worst case exposure estimates.

187. Table 3 provides dosage information for *G. cambogia* only supplements, whilst Table 4 provides dosage information for multi-ingredient *G. cambogia* dietary supplements, as sold in UK online retailers at the time of the assessment.

188. Table 5 and Table 6 provide the exposure estimates for adults (*G. cambogia* only and MIDS products respectively), while Table 7 and Table 8 provide the exposure estimates for toddlers (*G. cambogia* only and MIDS products respectively). There are exposure estimates for both *G. cambogia* and HCA, where possible. In some cases, insufficient information was provided to perform an exposure assessment for one or the other.

Table 3 - Dosage information for *G. cambogia* only supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	Supplement type	Recommended daily serving	<i>G. cambogia</i> concentration per unit (capsule/ tablet/ scoop etc) (mg)	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)
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BodyBuilding Warehouse Pure <i>Garcinia cambogia</i>	Capsules	1-2 capsules	500	1000	60% (600)
UK Health House <i>Garcinia Cambogia</i> - High Strength - 1000mg Tablets 60% HCA Max	Tablets	1-2 tablets	1000	2000	60% (1200)
HERBASENSE GARCINIA CAMBOGIA EXTRACT - 60% HCA by HPLC	Powder	3 spoons (1.5g)	1500	4500	60% (2700)
NOW Foods, <i>Garcinia</i> , 120 Tablets	Tablets	1-3 tablets	1000	3000	50% (1500)
Fitimins <i>Garcinia Cambogia</i> Extract 1000mg Capsule	Capsules	2 capsules	1000	2000	60% (1200)

BioTechUSA HCA - 100 caps	Capsules	3 capsules	1000	3000	60% (1800)
Woods Supplements <i>Garcinia Cambogia</i> 1000mg	Capsules	1 capsule	1000	1000	Not provided
Paradise Herbs, Garcinia Extract, 500 mg, 60 Vegetarian Capsules	Capsules	1-3 capsules	500	1500	50% (750)
Inlife Garcinia 1600 MG Capsules - 120 Capsules	Capsules	2-3 capsules	1600	4800	>60% (>2880)
Himalaya, Organic Garcinia, 60 Caplets	Caplets	2 caplets	600	1200	66% (792)
Swanson <i>Garcinia Cambogia</i> 5:1 Extract, 80mg - 60 caps	Capsules	1 capsule	80	80	Not provided

Soty Garcinia	Capsules	3 capsules	250	750	60% (450)
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DR WAKDE'S Garcinia Fruit Powder - 100g (3.5oz) Pure, Raw & Dried Powder Ayurvedic Herb Vegan Nothing Added, Nothing Removed Same Day Dispatch	Powder	1-2 teaspoons (5-10g)	5,000 (5g teaspoon)**	10,000**	Not provided
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<i>Garcinia Cambogia</i> 1500mg 120 Vegan Capsules High Strength 20:1 Whole Fruit Powder Premium Quality Supplement by Horbaach	Capsules	1 capsule	1500	1500	Not provided
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Black Swan Hydroxycitric Acid Capsules - 500mg HCA Garcinia Cambogia Enhanced Mood Weight Management Metabolic Support Natural Food Supplement - 30 Capsules 1 Month Supply	Capsules	1-2 capsules	Not provided**	Not provided**	Percentage content not provided** (1000)
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* Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Table 4 Dosage information for multi-ingredient G. cambogia dietary supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	Supplement type	Recommended daily serving	G. cambogia concentration per unit (capsule/ tablet/ scoop etc) (mg)	G. cambogia concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)
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Swiss Bioenergetics <i>Garcinia cambogia</i>	Capsules	3-6 capsules	500	3000	Not provided
Nutralie <i>Garcinia cambogia</i> complex fat burner	Capsules	3 capsules	667	2000	60% (1200)
Holland & Barrett <i>Garcinia Cambogia</i> & Green Coffee Bean 100 Capsules	Capsules	2 capsules	300	600	Not provided
HERBASENSE <i>Garcinia Cambogia</i> Plus Jar - 60% HCA by HPLC + Green Coffee Bean + Green Tea Extracts	Powder	3 spoons (1.5g)	1500	4500	60% (2700)

Sensilab Essentials <i>Garcinia Cambogia</i> 1,800mg High Dose - Vegan, 90 Capsules	Capsules	3 capsules	600	1800	60% (1080)
Sensilab Garcinia Slim	Capsules	2 capsules	209	417	60% (250)
GARCINIA ULTRA BLEND (with Acai & Green Tea) 60 Vegetarian Capsules	Capsules	1-2 capsules	100	200	55% (110)

Garcinia
Cambogia -
90 Capsules -
1500mg
Daily Dosage
- Premium
Quality
Supplement -
UK
formulated -
Vegetarian &
Vegan
Suitable -
Optimum
Strength For
Maximum
Results -
Garcinia
Clean For
Men &
Women

Capsules

3 capsules

500

1500

Not
provided

<p>Apple Cider Vinegar with Cayenne Pepper, Turmeric & Ginger Root + <i>Garcinia Cambogia</i> with Calcium, Potassium, Chromium, etc. - UK Formulated Food Supplements Capsules - Both Vegan & Vegetarian Suitable</p>	Capsules	3 capsules	1500**	4500**	15% (675)**
<p>Prowise Healthcare Essentials <i>Garcinia Cambogia</i> High Dose - Vegan, 180 Capsules</p>	Capsules	2 capsules	1000	2000	Not provided
<p>Troo Health Care <i>Garcinia Cambogia</i> Complex Supplement - 90 Capsules UK Manufactured</p>	Capsules	3 capsules	500	1500	Not provided

<i>Garcinia Cambogia</i> 1500mg Daily Dosage -with Added Chromium Picolinate for Rapid Absorption - 30 Day Supply of The Super Strength Whole Fruit - Manufactured in The UK	Capsules	3 capsules	500	1500	Not provided
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*Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Table 5 - Exposure estimates for adults from *G. cambogia* only supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
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BodyBuilding Warehouse Pure <i>Garcinia cambogia</i>	1000	60% (600)	13	7.6
UK Health House <i>Garcinia Cambogia</i> - High Strength - 1000mg Tablets 60% HCA Max	2000	60% (1200)	25	15
HERBASENSE GARCINIA CAMBOGIA EXTRACT - 60% HCA by HPLC	4500	60% (2700)	57	34
NOW Foods, Garcinia, 120 Tablets	3000	50% (1500)	38	19
Fitimins <i>Garcinia</i> <i>Cambogia</i> Extract 1000mg Capsule	2000	60% (1200)	25	15
BioTechUSA HCA - 100 caps	3000	60% (1800)	38	23
Woods Supplements <i>Garcinia Cambogia</i> 1000mg	1000	Not provided	13	Not provided

Paradise Herbs, Garcinia Extract, 500 mg, 60 Vegetarian Capsules	1500	50% (750)	19	9.5
Inlife Garcinia 1600 MG Capsules - 120 Capsules	4800	>60% (>2880)	61	37
Himalaya, Organic Garcinia, 60 Caplets	1200	66% (326)	15	10
Swanson <i>Garcinia Cambogia</i> 5:1 Extract, 80mg - 60 caps	80	Not provided	1.0	Not provided
Sotya Garcinia	750	60% (450)	9.5	5.7
DR WAKDE'S Garcinia Fruit Powder - 100g (3.5oz) Pure, Raw & Dried Powder Ayurvedic Herb Vegan Nothing Added, Nothing Removed Same Day Dispatch	10,000**	Not provided	130	Not provided

Garcinia Cambogia
 1500mg | 120
 Vegan Capsules |
 High Strength 20:1
 Whole Fruit Powder 1500 Not provided 19 Not provided
 | Premium Quality
 Supplement | by
 Horbaach

Black Swan
 Hydroxycitric Acid
 Capsules - 500mg
 HCA Garcinia
 Cambogia
 Enhanced Mood Percentage
 Weight Not provided** content not
 Management (1000) Not provided 13
 Metabolic Support
 Natural Food
 Supplement - 30
 Capsules 1 Month
 Supply

* Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Table 6 - Exposure estimates for adults from multi-ingredient *G. cambogia* dietary supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Swiss Bioenergetics <i>Garcinia cambogia</i>	3000	Not provided	38	Not provided
Nutralie <i>Garcinia cambogia</i> complex fat burner	2000	60% (1200)	25	15
Holland & Barrett <i>Garcinia Cambogia</i> & Green Coffee Bean 100 Capsules	600	Not provided	7.6	NA
HERBASENSE <i>Garcinia Cambogia</i> Plus Jar - 60% HCA by HPLC + Green Coffee Bean + Green Tea Extracts	4500	60% (2700)	57	34
Sensilab Essentials <i>Garcinia Cambogia</i> 1,800mg High Dose - Vegan, 90 Capsules	1800	60% (1080)	23	14

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Sensilab Garcinia Slim	417	60% (250)	5.3	3.2
GARCINIA ULTRA BLEND (with Acai & Green Tea) 60 Vegetarian Capsules	200	55% (110)	2.5	1.4
<i>Garcinia Cambogia</i> - 90 Capsules - 1500mg Daily Dosage - Premium Quality Supplement - UK formulated - Vegetarian & Vegan Suitable - Optimum Strength For Maximum Results - Garcinia Clean For Men & Women	1500	No provided	19	Not provided

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Apple Cider Vinegar with Cayenne Pepper, Turmeric & Ginger Root + <i>Garcinia Cambogia</i> with Calcium, Potassium, Chromium, etc. - UK Formulated Food Supplements Capsules - Both Vegan & Vegetarian Suitable	4500**	15% (675)**	25	8.6
Prowse Healthcare Essentials <i>Garcinia Cambogia</i> High Dose 2000 - Vegan, 180 Capsules		Not provided	25	Not provided
Troo Health Care <i>Garcinia Cambogia</i> Complex Supplement - 90 Capsules UK Manufactured	1500	Not provided	19	Not provided

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
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Garcinia Cambogia

1500mg Daily
 Dosage -with Added Chromium Picolinate for Rapid Absorption - 30 Day Supply of The Super Strength Whole Fruit -
 Manufactured in The UK

1500

Not provided

19

Not provided

* Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Table 7 - Exposure estimates for toddlers from *G. cambogia* only supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
BodyBuilding Warehouse Pure <i>Garcinia cambogia</i>	1000	60% (600)	68	41
UK Health House <i>Garcinia Cambogia</i> - High Strength - 1000mg Tablets 60% HCA Max	2000	60% (1200)	140	82
HERBASENSE GARCINIA CAMBOGIA EXTRACT - 60% HCA by HPLC	4500	60% (2700)	310	180
NOW Foods, Garcinia, 120 Tablets	3000	50% (1500)	210	100
Fitimins <i>Garcinia Cambogia</i> Extract 1000mg Capsule	2000	60% (1200)	140	82
BioTechUSA HCA - 100 caps	3000	60% (1800)	210	120

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Woods Supplements <i>Garcinia Cambogia</i> 1000mg	1000	Not provided	68	Not provided
Paradise Herbs, Garcinia Extract, 500 mg, 60 Vegetarian Capsules	1500	50% (750)	100	51
Inlife Garcinia 1600 MG Capsules - 120 Capsules	4800	>60% (>2880)	330	200
Himalaya, Organic Garcinia, 60 Caplets	1200	66% (326)	82	54
Swanson <i>Garcinia Cambogia</i> 5:1 Extract, 80mg - 60 caps	80	Not provided	5.5	Not provided
Sotya Garcinia	750	60% (450)	51	31

Supplementname	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
DR WAKDE'S Garcinia Fruit Powder - 100g (3.5oz) Pure, Raw & Dried Powder Ayurvedic Herb Vegan Nothing Added, Nothing Removed Same Day Dispatch	10,000**	Not provided	680	Not provided
<i>Garcinia Cambogia</i> 1500mg 120 Vegan Capsules High Strength 20:1 Whole Fruit Powder Premium Quality Supplement by Horbaach	1500	Not provided	100	Not provided

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Black Swan Hydroxycitric Acid Capsules - 500mg HCA Garcinia Cambogia Enhanced Mood Weight Management Metabolic Support Natural Food Supplement - 30 Capsules 1 Month Supply	Not provided**	Percentage content not provided** (1000)	Not provided	68

* Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Table 8 - Exposure estimates for toddlers from multi-ingredient *G. cambogia* dietary supplements, as sold in UK online retailers at the time of the assessment.

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Swiss Bioenergetics <i>Garcinia cambogia</i>	3000	Not provided	210	Not provided
Nutralie <i>Garcinia cambogia</i> complex fat burner	2000	60% (1200)	140	82
Holland & Barrett <i>Garcinia Cambogia</i> & Green Coffee Bean 100 Capsules	600	Not provided	41	Not provided
HERBASENSE <i>Garcinia Cambogia</i> Plus Jar - 60% HCA by HPLC + Green Coffee Bean + Green Tea Extracts	4500	60% (2700)	310	180
Sensilab Essentials <i>Garcinia Cambogia</i> 1,800mg High Dose - Vegan, 90 Capsules	1800	60% (1080)	120	74

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Sensilab Garcinia Slim	417	60% (250)	29	17
GARCINIA ULTRA BLEND (with Acai & Green Tea) 60 Vegetarian Capsules	200	55% (110)	14	7.5
<i>Garcinia Cambogia</i> - 90 Capsules - 1500mg Daily Dosage - Premium Quality Supplement - UK formulated - Vegetarian & Vegan Suitable - Optimum Strength For Maximum Results - Garcinia Clean For Men & Women	1500	No provided	100	Not provided

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
Apple Cider Vinegar with Cayenne Pepper, Turmeric & Ginger Root + <i>Garcinia Cambogia</i> with Calcium, Potassium, Chromium, etc. - UK Formulated Food Supplements Capsules - Both Vegan & Vegetarian Suitable	4500**	15% (675)**	310	46
Prowse Healthcare Essentials <i>Garcinia Cambogia</i> High Dose 2000 - Vegan, 180 Capsules		Not provided	140	Not provided
Troo Health Care <i>Garcinia Cambogia</i> Complex Supplement - 90 Capsules UK Manufactured	1500	Not provided	100	Not provided

Supplement name	<i>G. cambogia</i> concentration in a daily serving (maximum serving size*) (mg)	HCA content % (mg in maximum daily serving*)	Exposure to <i>G. cambogia</i> HCA (maximum daily serving*) (mg/ kg bw/day)	Exposure to HCA (maximum daily serving*) (mg/ kg bw/day)
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Garcinia Cambogia

1500mg Daily

Dosage -with Added

Chromium Picolinate

for Rapid Absorption

- 30 Day Supply of

The Super Strength

Whole Fruit -

Manufactured in The

UK

1500

Not provided

100

Not provided

* Maximum serving assumes the maximum amount recommended on the packaging or website of the supplement. E.g. if recommended to take 1-2 capsules per day, this table assumes 2 capsules would be taken. Another example is if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the highest suggestion has been used.

**An assumption has been made regarding the value, see Table 1 (Annex A of TOX/2025/41) for more details.

Uncertainties in the exposure assessment

189. It should be highlighted that the UK market analysis of *G. cambogia* dietary supplements was performed in brief and as such, may not include all products that are available online. Thus, products with higher dosage recommendations and resulting in higher estimated exposures may exist on the UK market.

190. Some assumptions have been made where dosage recommendations are varied. In cases where the dosage is given as a range (e.g. 1-3 capsules per

day), the highest possible amount has been assumed to be consumed (e.g. 3 capsules per day). Also, where there is a discrepancy between the packaging image and website instructions, the highest dosage has been assumed e.g. if the website suggests a serving of 2 capsules a day, but the packaging suggests 3, then the value of 3 has been used.

191. Some assumptions have been made where *G. cambogia* or HCA content has not been explicitly stated. E.g. for pure *G. cambogia* it is assumed that 5g-10g of the powder is equal to 5000-10,000 mg of *G. cambogia* (1g = 1000mg). I.e. it is assumed that no other ingredient(s) are present.

192. As stated in paragraph 186, most supplements in the market analysis, provided warnings on the website/ packaging recommending that that the product is only suitable for adults. However, exposures for other age groups could not be completely excluded. Toddlers have been selected as the age group for worst case exposure estimates, which are expressed on a per kg bodyweight basis. This is expected to be a conservative assessment and likely to be protective of other age groups under the age of 18 due to the average bodyweight of toddlers being lower than older children.

193. Infants have not been included in the assessment as it is assumed that supplements intended for weight loss and provided as small capsules or powders that could cause a choking hazard would not be used for infants.

Uncertainties

194. The following uncertainties have been noted:

- Dietary supplement labels often do not list the full scientific name/specie of *G. cambogia* nor the part of the plant that the extract(s) is/are derived from. This represents an uncertainty as it does not allow accurate determination of the components of the food product (including food supplements).
- *G. cambogia* products have inconsistent labelling. Some are simply marketed as *G. cambogia* or *G. cambogia* extract without describing whether it is HCA nor the standardised HCA content. This poses an issue for both exposure and risk assessment as the HCA content is unknown.
- The percentage of standardised HCA in *G. cambogia* extract or the salt form of HCA in food supplement products is not always disclosed and there is inconsistency in labelling of said products. Depending on the amount of concentrate and the form of HCA salt, the toxicological profile could potentially be different.

- *G. cambogia* (and/or its extract; HCA) is more commonly present in MIDS that have other active compounds that may or may not be fully disclosed, which does not allow for a comprehensive risk assessment.
- If *G. cambogia* (and/or its extract) is present in MIDS there is a potential synergistic effect of the mixture, the potential risk(s) of which is unknown.
- Consumers may use more than one HIDS and/or in combination with prescription drugs. Incorrect dosing is also possible should the consumer not follow the manufacturers' instructions.
- Considerations for the presence of contaminants such as heavy metals, extraction solvents (from the manufacturing process), pesticides or any other chemicals that could pose a risk to health have not been considered in this assessment.
- Case reports in the literature are limited to certain brands and formulations of *G. cambogia* and may not always provide the holistic state of the consumer: granularity on duration of exposure and dose, health status of the consumer (e.g., do they have suspected liver injury or immunocompromised or any other, fasting or non-fasting, physically active or not active), concomitant with other drugs or MIDS. Thus, identification of sensitive population and establishment of a mode of action for the toxicity observed in these cases is always not possible.
- Possible drug-drug interactions have been reported in some case-studies (e.g., anti-depression (serotonergic drugs), drugs affecting the liver). However, there is little scientific information to be able to fully assess this potential risk. Furthermore, it is unknown if other types of medication can cause adverse drug interaction.
- The long-term safety of *G. cambogia* (and/or its extract; HCA) has not been established.