

Pet Foods

Category 17 · 2026 Edition · 10 subcategories

Human-grade over-compliance — Method v2.0

PROVISIONAL EDITION — NOT YET DOI-REGISTERED

This is a provisional edition issued ahead of formal registration. Every limit is current and identical to the live standard at heavymetalcertified.com/manuals/pet-foods and to the per-subcategory standard pages; a version-pinned edition with a registered DOI is in preparation. Cite the URL, not a DOI, until the registered edition is released.

AUTHOR & PUBLISHER

Karen Pendergrass · ORCID 0000-0002-2348-7259
Institute of Contaminant Standards (ICS) · Heavy Metal Tested & Certified

EDITION

2026 Edition · effective 2026-08-13 · 10 subcategories · 11 analytes (Pb, Cd, tAs, iAs, tHg, MeHg, Ni, Sn, Al, Cr, Cr-VI)

About this standard

The Heavy Metal Tested & Certified standard for Category 17, Pet Foods. Pet food is legally feed, whose heavy-metal ceilings run well above human food; HMTc does not certify to that feed floor. Each limit is the strictest human-food sovereign maximum for the nearest analog, adopted as a voluntary human-grade over-compliance — the pet-feed floor is disclosed on every analyte and never selects the number. This volume states the methodology, the master limit matrix for all ten subcategories, and each subcategory's per-analyte derivation. Every number is identical to the web edition; nothing is selected from measured data.

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How the limits are set

Pet food is legally feed, not food: its heavy-metal ceilings are set by feed law — EU Directive 2002/32/EC, FDA Center for Veterinary Medicine guidance, and the AAFCO model regulations — whose maximum levels run well above the corresponding human-food limits. HMTc does not certify to that feed floor. Each analyte is set to the strictest applicable human-food sovereign maximum for the nearest human-food analog, adopted as a voluntary human-grade over-compliance; the feed floor is disclosed on every row and never selects the number. Basis is never conflated — dry, as-sold products (kibble, semi-moist, freeze-dried, treats, chews) read across only from dry human analogs, and wet, as-consumed products (canned, raw, toppers, milk replacers, fish-based diets) only from as-consumed analogs, with no wet-to-dry conversion. Tier 1 toxics (Pb, Cd, iAs, Hg) are zero-tolerance; Tier 2 (tAs, Ni, Cr, Al, Sn) carry the program's 150% transitional allowance. Inorganic arsenic and hexavalent chromium operate as reflex speciation screens bounded by total arsenic and total chromium; methylmercury has no terrestrial biomagnification pathway and is bounded by total mercury; tin is material only for canned product, where it migrates from the tin-coated can, and is controlled by screen — not assigned an invented number — on every non-canned form.

How to read this standard

Every limit is a maximum level for the finished product in that subcategory's native basis — dry products as sold, wet products as consumed. A limit is not an ingredient specification: an ingredient (including a novel protein such as a precision-fermented, yeast-expressed animal-protein equivalent) is assessed by its contribution to the finished product at its inclusion rate. A supplier can back-calculate a defensible ingredient ceiling from the finished-product limit and the intended inclusion rate, and should control the heavy-metal load of its own feedstock and fermentation media accordingly.

Tier 1 toxics (Pb, Cd, iAs, Hg) are zero-tolerance — there is no safe threshold, so the limit is the compliance line. Tier 2 (tAs, Ni, Cr, Al, Sn) carry the program's 150% transitional allowance. iAs and Cr-VI are reflex speciation screens bounded by total arsenic and total chromium; MeHg has no terrestrial pathway and is bounded by total mercury; tin is material only for canned product, where it migrates from the tin-coated can. In the tables that follow, n/m marks a not-material analyte (controlled by reflex speciation, not a number) and ctrl a measured surveillance control for which no government sets a ceiling.

Master limit matrix

All values µg/kg (ppb) in each row's native basis. n/m = not material (reflex speciation); ctrl = measured surveillance control, no numeric ceiling; — = not applicable. Each subcategory's full derivation follows in Part 3.

Subcategory	Pb	Cd	tAs	iAs	Hg	MeHg	Ni	Sn	Al	Cr	Cr-VI	Basis
Complete & balanced dry (kibble)	20	40	100	100	20	n/m	800	n/m	ctrl	500	n/m	as sold
Complete & balanced canned / wet	100	50	100	20	50	n/m	ctrl	200000	ctrl	1000	n/m	as consumed
Semi-moist pet foods	20	40	100	100	20	n/m	800	n/m	ctrl	500	n/m	as sold
Raw pet foods (frozen / chilled raw diets)	100	50	100	20	50	n/m	ctrl	n/m	ctrl	1000	n/m	as consumed
Freeze-dried / dehydrated (including freeze-dried raw)	20	40	100	100	20	n/m	800	n/m	ctrl	500	n/m	as sold
Fish-based / marine-protein complete diets	200	50	1000	100	300	—	ctrl	n/m	ctrl	1000	n/m	as consumed
Pet treats / snacks	20	40	100	100	20	n/m	800	n/m	ctrl	500	n/m	as sold
Pet chews (including dental chews)	20	40	100	100	20	n/m	800	n/m	ctrl	500	n/m	as sold
Toppers / mixers / broths	100	50	100	20	50	n/m	ctrl	n/m	ctrl	1000	n/m	as consumed
Milk replacers and specialty pet liquids	20	50	50	ctrl	10	n/m	100	n/m	500	300	n/m	as consumed

Per-subcategory derivations

For each subcategory, every analyte's HMTc limit, the human-food sovereign maximum it is read across from, and the pet-FEED floor it beats (disclosed for contrast, never selected). Values in µg/kg, native basis stated per subcategory.

3.1 Complete & balanced dry (kibble) as sold · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	HK · Cereal-based food intended to be consumed principally by per...	JP 3,000
Cd	1	40	EU · pulses, general	JP 1,000
tAs	2	100	PY · pulses, dried legume seeds, except soybean	EU 2,000
iAs	1	100	IL · Dried legumes, including peanuts and soybeans	JP 2,000
Hg	1	20	HK · Rice, husked rice, polished rice, maize, maize flour, wheat,...	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	800	EU · cereals except durum/rice/husked-rice/pseudocereal/oat rows	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	500	HK · Vegetables, other than pulses	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.2 Complete & balanced canned / wet

as consumed · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	100	AU-NZ · meat of cattle, sheep, pig, and poultry, excluding offal	JP 3,000
Cd	1	50	EU · meat of bovine animals, sheep, pig, and poultry	JP 1,000
tAs	2	100	IN · Named animal fats (lard, rendered pork fat, premier jus and ...	EU 2,000
iAs	1	20	IL · Meat and meat products, including poultry and game, except l...	JP 2,000
Hg	1	50	HK · Meat of animal	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Sn	2	200000	EU · canned foods other than canned beverages, except canned drie...	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	1000	HK · Meat of animal	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.3 Semi-moist pet foods

as sold · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	HK · Cereal-based food intended to be consumed principally by per...	JP 3,000
Cd	1	40	EU · pulses, general	JP 1,000
tAs	2	100	PY · pulses, dried legume seeds, except soybean	EU 2,000
iAs	1	100	IL · Dried legumes, including peanuts and soybeans	JP 2,000
Hg	1	20	HK · Rice, husked rice, polished rice, maize, maize flour, wheat,...	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	800	EU · cereals except durum/rice/husked-rice/pseudocereal/oat rows	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	500	HK · Vegetables, other than pulses	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.4 Raw pet foods (frozen / chilled raw diets)

as consumed · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	100	AU-NZ · meat of cattle, sheep, pig, and poultry, excluding offal	JP 3,000
Cd	1	50	EU · meat of bovine animals, sheep, pig, and poultry	JP 1,000
tAs	2	100	IN · Named animal fats (lard, rendered pork fat, premier jus and ...	EU 2,000
iAs	1	20	IL · Meat and meat products, including poultry and game, except l...	JP 2,000
Hg	1	50	HK · Meat of animal	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	1000	HK · Meat of animal	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.5 Freeze-dried / dehydrated (including freeze-dried raw)

as sold · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	HK · Cereal-based food intended to be consumed principally by per...	JP 3,000
Cd	1	40	EU · pulses, general	JP 1,000
tAs	2	100	PY · pulses, dried legume seeds, except soybean	EU 2,000
iAs	1	100	IL · Dried legumes, including peanuts and soybeans	JP 2,000
Hg	1	20	HK · Rice, husked rice, polished rice, maize, maize flour, wheat,...	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	800	EU · cereals except durum/rice/husked-rice/pseudocereal/oat rows	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	500	HK · Vegetables, other than pulses	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.6 Fish-based / marine-protein complete diets

as consumed · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	200	FJ · Muscle meat of fish, excluding those listed below	JP 3,000
Cd	1	50	GSO · Muscle meat of fish with exception mentioned	JP 1,000
tAs	2	1000	PY · raw, frozen, or refrigerated fish	EU 10,000
iAs	1	100	EU · muscle meat of fish, species other than those listed under A...	CN 2,000
Hg	1	300	EU · listed lower-mercury fish and cephalopods/marine gastropods,...	CN 300
MeHg	1	—	—	—
Ni	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	1000	HK · Fish	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.7 Pet treats / snacks

as sold · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	HK · Cereal-based food intended to be consumed principally by per...	JP 3,000
Cd	1	40	EU · pulses, general	JP 1,000
tAs	2	100	PY · pulses, dried legume seeds, except soybean	EU 2,000
iAs	1	100	IL · Dried legumes, including peanuts and soybeans	JP 2,000
Hg	1	20	HK · Rice, husked rice, polished rice, maize, maize flour, wheat,...	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	800	EU · cereals except durum/rice/husked-rice/pseudocereal/oat rows	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	500	HK · Vegetables, other than pulses	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.8 Pet chews (including dental chews)

as sold · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	HK · Cereal-based food intended to be consumed principally by per...	JP 3,000
Cd	1	40	EU · pulses, general	JP 1,000
tAs	2	100	PY · pulses, dried legume seeds, except soybean	EU 2,000
iAs	1	100	IL · Dried legumes, including peanuts and soybeans	JP 2,000
Hg	1	20	HK · Rice, husked rice, polished rice, maize, maize flour, wheat,...	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	800	EU · cereals except durum/rice/husked-rice/pseudocereal/oat rows	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	500	HK · Vegetables, other than pulses	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.9 Toppers / mixers / broths

as consumed · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	100	AU-NZ · meat of cattle, sheep, pig, and poultry, excluding offal	JP 3,000
Cd	1	50	EU · meat of bovine animals, sheep, pig, and poultry	JP 1,000
tAs	2	100	IN · Named animal fats (lard, rendered pork fat, premier jus and ...	EU 2,000
iAs	1	20	IL · Meat and meat products, including poultry and game, except l...	JP 2,000
Hg	1	50	HK · Meat of animal	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	ctrl	measured surveillance control (no sovereign ceiling)	—
Cr	2	1000	HK · Meat of animal	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—

3.10 Milk replacers and specialty pet liquids

as consumed · human-grade over-compliance · feed floor disclosed

Analyte	Tier	HMTc limit	Human-food basis of the limit (read-across analog)	Pet-feed floor
Pb	1	20	IN · Secondary milk products (as consumed)	JP 3,000
Cd	1	50	PY · fluid milk ready for consumption and dairy products without ...	JP 1,000
tAs	2	50	PY · fluid milk ready for consumption and dairy products without ...	EU 2,000
iAs	1	ctrl	measured surveillance control (no sovereign ceiling)	JP 2,000
Hg	1	10	HK · Secondary milk products	EU 300
MeHg	1	n/m	not material — controlled by reflex speciation	—
Ni	2	100	EU · infant/young-child formula, liquid	—
Sn	2	n/m	not material — controlled by reflex speciation	—
Al	2	500	AU-NZ · infant formula, follow-on formula, and special medical purpo...	—
Cr	2	300	CN · raw, pasteurized, sterilized, modified and fermented milk (G...	CN 5,000
Cr-VI	2	n/m	not material — controlled by reflex speciation	—