Summary of information from TOX/2024/38 and TOX/2025/04

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31. Absorption of antimony is low. Absorption through the gastrointestinal tract is estimated at approximately 1% for antimony trioxide and 10% for antimony potassium tartrate.

32. A number of studies on antimony are available, with a wide range of NOAELs reported. The toxicity of antimony has been reviewed by WHO (2003), ATSDR (2019) and Health Canada (2024).

33. Though WHO, ATSDR and Health Canada have used the findings from Poon et al. (1998) study, they diverge significantly in their interpretation of the study results and the selection of NOAEL. Table 2 below summarises the values and the uncertainty factors used.

Table 2: Comparison of NOAELs, uncertainty factors and TDI/MRL values from different authoritative bodies.

Authority	NOAEL (µg/kg bw/day)	Uncertainty factor	TDI/MRL (µg/kg bw/day)
WHO (2003)	6000	1000 (100 for interspecies and intraspecies differences and 10 for the use of subchronic study).	6
Health Canada (2024)	60	300 (100 for interspecies and intraspecies differences and 3 for the use of subchronic study).	0.2
ATSDR (2019)	60	100 (10 for interspecies and 10 for intraspecies differences).	0.6 (Intermediate MRL for 14-365 days).

34. In their evaluations of metals in the diet, e.g., in 2006 and 2017, COT used the WHO TDI as a basis for its assessment.

35. The COT agreed at the October 2024 meeting with the NOAEL of 6,000 µg/kg bw/day used by the WHO (recommended by Lynch et al. (1999)) for the Poon et al. (1998) study. Some lower LOAELs and NOAELs have been reported in some of the studies summarised above and there is a need to consider the most suitable critical PoD for oral exposure to antimony.