Summary and Questions for the Committee

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Summary

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

57. 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).

58. 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	6
Health Canada (2024)	60	300	0.2
ATSDR (2019)	60	100	0.6 (MRL)

59. 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.

60. The COT has not yet seen or commented on the full ATSDR, 2019 and Health Canada's 2024 evaluation. The HBGVs by ATSDR and Health Canada are not aligned with WHO's HBGV from 2003.

Questions for the Committee

61. Members are invited to consider the following questions:

i) What is the Committee's opinion on the interpretation and conclusion of the 90-day drinking water toxicity study of antimony in rats by Poon *et al.,* (1998)?

ii) From the studies presented, is the Committee able to identify a NOAEL on which the assessment of antimony should be based?

iii) Is the Committee able to derive a health-based guidance value for antimony and if so, what uncertainty factors does the Committee propose to use with the NOAEL?

iv) Are there any other uncertainties or considerations the Committee would like to highlight in evaluating antimony?

v) Does the Committee have any other comments?

Secretariat

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