

**ERRATUM****Chapter 5, Paragraph 66**

(1) In deriving the LQM/CIEH GAC for chromium[III], an inhalation TDI of 0.0001 mg/kg bw/day was used. This TDI is incorrect and arises from an oversight in Paragraph 66 of Chapter 5 which states that "an inhalation TDI of 0.0001 mg chromium[III] m<sup>-3</sup> was selected to derive the LQM/CIEH GAC for chromium[III]". The oversight is that the value of 0.0001 mg chromium[III] m<sup>-3</sup> is indeed an inhalation MRL for soluble chromium[III] particulate compounds reported by the ATSDR and requires further conversion based on an assumed inhalation rate and body weight to become a TDI with units of mg kg<sup>-1</sup> bw day<sup>-1</sup>. Assuming an inhalation rate of 20 m<sup>3</sup> day<sup>-1</sup> and a body weight of 70 kg, the inhalation TDI for chromium[III] would be 0.00003 mg kg<sup>-1</sup> bw day<sup>-1</sup> or 0.03 ug kg<sup>-1</sup> bw day<sup>-1</sup> (see revised Table 5-1 below).

(2) Employing this revised inhalation TDI into the CLEA model leads to a reduction in the chromium[III] GAC values for each generic land use exposure scenario (see revised Table 5-7 below). For the residential land use, the revised GAC becomes 627 mg kg<sup>-1</sup>. For the allotment and commercial land uses, the revised GAC becomes 15300 mg kg<sup>-1</sup> and 8840 mg kg<sup>-1</sup>, respectively. The revised contributions to total exposure for the relevant pathways as calculated for chromium[III] by the CLEA software for the generic land uses are given in Table 5-8 below.

**Table 5-1 Toxicological values for chromium(III)**

Threshold effects		Non-threshold effects
Oral TDI (µg kg <sup>-1</sup> BW day <sup>-1</sup> )	Oral MDI (µg day <sup>-1</sup> )	Oral ID (µg kg <sup>-1</sup> BW day <sup>-1</sup> )
150	60.2	Not applicable
Inhalation TDI (µg kg <sup>-1</sup> BW day <sup>-1</sup> )	Inhalation MDI (µg day <sup>-1</sup> )	Inhalation ID (µg kg <sup>-1</sup> BW day <sup>-1</sup> )
0.03	0.27	Not applicable

**Table 5-7 LQM/CIEH Generic Assessment Criteria for Chromium(III) according to land use**

Land Use	GAC (mg kg <sup>-1</sup> DW) <sup>a,b,c</sup>
	Chromium(III)
Residential	627
Allotment	15300
Commercial	8840

<sup>a</sup> Based on a sandy loam soil as defined in SR3 and 6% soil organic matter (SOM).

<sup>b</sup> Figures are rounded to two significant figures

<sup>c</sup> In applying the rules for non-soil background to the GAC, the background ADE is limited to being no larger than the contribution from the relevant soil ADE

**Table 5-8 Contribution to total exposure for the relevant pathways as calculated for Chromium(III) by the CLEA software for the generic land-uses**

Land use	ADE to HCV ratios		
	Residential	Allotment	Commercial
Oral ADE to HCV ratio at GAC	0.03	0.29	0.03
Inhalation ADE to HCV ratio at GAC	0.97	0.71	0.97
	Contribution to total exposure from soil and background sources according to land-use (%)		
Ingestion of soil and indoor dust <sup>2</sup>	57.1	65.8	81.7
Consumption of homegrown produce and attached soil	0.94	26.8	NA
Dermal contact (indoor)	0.0	NA	0.0
Dermal contact (outdoor)	0.0	0.0	0.0
Inhalation of dust (indoor)	0.18	NA	0.5
Inhalation of dust (outdoor)	0.0	0.03	0.0
Inhalation of vapour (indoor)	0.0	NA	0.0
Inhalation of vapour (outdoor)	0.0	0.0	0.0
Oral background	41.6	7.3	17.7
Inhalation background	0.18	0.03	0.08

<sup>1</sup> Rounded to one decimal place

<sup>2</sup> Treated as one pathway (Environment Agency, 2009)

ADE = Average Daily Exposure

HCV = Health Criteria Value

NA = Not applicable (This exposure pathway is not included in the generic land use)