## **APPENDIX C1**

Physico-Chemical Properties and Chemical Classes of Metals Analyzed in the Applicability Domain of the LLNA

Draft LLNA	Applicability	Domain Addendum	: Appendix C1

January 18, 2008

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## **Physico-Chemical Properties – Metals (Sorted Alphabetically)**

Substance Name	Synonyms	CASRN	Molecular Weight (g/mol)	Log Kow <sup>1</sup>	Physical Form	Chemical Class <sup>2</sup>	Structure <sup>3</sup>
Aluminum chloride	Aluminum chloride, anhydrous	7446-70-0	NA	NA	Solid	Inorganic Chemicals, Aluminum Compounds; Inorganic Chemicals, Chlorine Compounds	CI—AI
Ammonium tetrachloroplatinate <sup>5</sup>	Ammonium platinous chloride, Ammonium chloroplatinate	13820-41-2	372.97	0.47	Solid	Inorganic Chemicals, Platinum Compounds	CIT NH <sub>4</sub> -CI—Pt <sup>2</sup> +-CIT -CIT NH <sub>4</sub>
Beryllium sulfate	Beryllium sulfate tetrahydrate	7787-56-6	177.14	NA	Solid	Inorganic Chemicals; Metals; Salts	H <sub>2</sub> O H <sub>2</sub> O H <sub>2</sub> O H <sub>2</sub> O H <sub>2</sub> O
Cobalt chloride	Cobaltous chloride	7646-79-9	129.84	0.85	Solid	Inorganic Chemicals; Metals; Salts	[CI <sup>-</sup> ] <sup>ht</sup> [Co <sup>2+</sup> ]
Cobalt (II) salts	NA	NA	NA	NA	Solid	Inorganic Chemicals; Metals; Salts	NA

Substance Name	Synonyms	CASRN	Molecular Weight (g/mol)	Log Kow <sup>1</sup>	Physical Form	Chemical Class <sup>2</sup>	Structure <sup>3</sup>
Cobalt sulfate	Cobaltous sulfate	10124-43-3	154.99	0.63	Solid	Inorganic Chemicals; Metals; Salts	o = -o- co²+
Copper chloride	Cuprous chloride	7758-89-6	98.99	-0.26	NA	Inorganic Chemicals; Metals; Salts	Cu—CI
Gold chloride	Gold tetrachloride	16903-35-8	339.79	0.16	Solid	Inorganic Chemicals, Gold Compounds; Salts	CI 
Lead acetate	Acetic acid, lead salt	15347-57-6	325.29	-0.08	Solid	Inorganic Chemicals; Metals; Salts	O- PbH <sub>2</sub> <sup>2+</sup> -O CH <sub>3</sub>
Manganese chloride	Manganese chloride, anhydrous	7773-01-5	125.84	0.85	Solid	Inorganic Chemicals, Manganese Compounds; Salts	CI CI

Substance Name	Synonyms	CASRN	Molecular Weight (g/mol)	Log Kow <sup>1</sup>	Physical Form	Chemical Class <sup>2</sup>	Structure <sup>3</sup>
Mercuric chloride	Mercuric (II) chloride	7487-94-7	271.5	0.15	Solid	Inorganic Chemicals, Mercury Compounds; Salts	CI—Hg—— CI
Nickel chloride	Nickelous chloride	7718-54-9	129.6	0.05	Solid	Inorganic Chemicals; Metals; Salts	CI / CI—Ni
Nickel (II) salts	NA	NA	NA	NA	Solid	Inorganic Chemicals; Metals; Salts	NA
Nickel sulfate	Nickel (II) sulfate	7786-81-4	154.76	-0.17	Solid	Inorganic Chemicals; Metals; Salts	0 = s - o- Ni <sup>2+</sup>
Potassium dichromate	PDC	7778-50-9	294.18	-2.24	Solid	Inorganic Chemicals, Chromium Compounds; Inorganic Chemicals, Potassium Compounds	K* -0 - Cr 0 K*

Substance Name	Synonyms	CASRN	Molecular Weight (g/mol)	Log Kow <sup>1</sup>	Physical Form	Chemical Class <sup>2</sup>	Structure <sup>3</sup>
Tin chloride	NA	1344-13-14	260.52	NA	Solid	Inorganic Chemicals, Tin Compounds; Salts	CI <sup>-</sup> Sn <sup>4+</sup> CI <sup>-</sup>
Zinc sulfate	Sulfuric acid, zinc salt; Zinc sulphate	7733-02-0	NA	NA	Solid	Inorganic Chemicals, Zinc Compounds; Salts	$0 = \begin{matrix} 0 \\ I \\ S - 0 \end{matrix}$ $Zn^{2+}$

Bold, italicized text represent the 11 metals reported in the original LLNA Evaluation Report (ICCVAM 1999).

Abbreviations: CASRN=Chemical Abstract Services Registry Number; g/mol=Grams per mole; Kow=Octanol-water partition coefficient; NA=Not available.

<sup>&</sup>lt;sup>1</sup>K<sub>ow</sub> represents the octanol-water partition coefficient (expressed on log scale) obtained from the website: <a href="http://www.syrres.com/esc/est\_kowdemo.htm">http://www.syrres.com/esc/est\_kowdemo.htm</a>.

<sup>&</sup>lt;sup>2</sup>Chemical classifications based on the Medical Subject Headings classification for chemicals and drugs, as developed by the National Library of Medicine at: <a href="http://www.nlm.nih.gov/mesh/meshhome.html">http://www.nlm.nih.gov/mesh/meshhome.html</a>.

<sup>&</sup>lt;sup>3</sup>Chemical structures, based on CASRN, were obtained from ChemID available at: http://chem.sis.nlm.nih.gov/chemidplus/chemidheavy.jsp.