

Au project

Becky Marks, Paul Whitehead
Adam Peters, Dean Leverett



Au and PM CN Working Group 13th December 2011 1

Collection of existing data on Au compounds

- Potential read across from Au (III) substances to TCA for *in vivo* repeat dose mamm tox studies
- Efforts must be made to obtain existing data before new testing is conducted
- Requests for information have been sent to potential data holders (pre-registrants) by PMRC for read across candidates including sodium tetrachloroaurate, gold trichloride, gold tribromide, gold triiodide, gold trinitrate
- Literature search proposed for relevant Au(III) substances to obtain information in the public domain

Aqueous solubility of Au

- Following a review of further information on gold chemistry it is concluded that:
 - Dissociation of TCA would give Au (III) and possibly Au (0), rather than Au(I)
 - Read across from other Au (III) to TCA is therefore considered appropriate
- Au(I) is unstable in aqueous media
- Au(III) is likely to exist as $\text{Au}(\text{OH})_4^-$ in most waters
- Possibility of read-across from Au(III) to soluble forms of Au(I)

Progress of agreed tests - physico-chemical

- Programme delayed due to delayed receipt of samples and sample documentation
- All samples and sample documentation have now been received by Harlan
- Draft report for vapour pressure has been received for Aurio (1+) 2,6,6 – trimethylbicyclo[3.1.1]heptanethiolate and is being reviewed
- Other tests are ongoing

Progress of agreed tests - ecotoxicity

- Range finders for *Daphnia* and algal tests for TCA commenced 12 December 2011
- Activated sludge respiration inhibition test commenced 12 December 2011
- EDTA in test media for ecotox tests can lead to chelation of test materials
 - Low EDTA media (ISO media) has been chosen for algal tests and media containing no EDTA for *Daphnia* tests

Progress of agreed tests - bio-elution

- Gold has been included in the bio-elution testing programme along with the PGM substances, for gastric and dermal fluids
- Contracts have been signed with CIMM in Chile
- Discussions are ongoing regarding refinement of samples for testing
- Current timelines are for bio-elution tests to commence in March 2012

Proposed mamm tox testing for TCA

- Position paper on draft ITS prepared by wca on 13 Oct 2011
- Data for some Annex VIII endpoints already available
- Effect of low pH on genotoxicity assays currently being evaluated (as part of PGM project). Endpoints require data to be generated
- No mamm tox testing is currently proposed for TCA until all attempts have been made to identify any existing data on relevant Au(III) substances from data holders, a literature search if necessary, and identification of the registration intentions of pre-registrants for relevant gold salts

ITS finalisation

- Proposal to finalise ITS report following receipt of Kow results for Aurio (1+) 2,6,6 – trimethylbicyclo[3.1.1]heptanethiolate and Balsams, copaiba, mixed with turpentine, gold salts so that Annex III status is confirmed
- Any changes to the test plan following this will be included as an addendum to the report

Next steps

- Physico-chemical, ecotoxicological and bio-elution test programmes are ongoing (wca)
- Investigate whether data is held by any of those who have pre-registered potential read across substances for TCA (PMRC)
- Propose that a literature search is conducted if necessary to identify publicly available data for read across to TCA (wca)