ACA
PHARMA CONCEPT GMBH
Regulatory & Scientific Expert Services

# Environmental Risk Assessment (ERA) services according to EMEA/CHMP/SWP/4447/00 Rev. 1-Corr

Please note that a database search (DBS) and request for data sharing with the data owner is only mandatory if a Phase II assessment is required.

## A) Initial steps

### Preparation of initial ERA (Module 1.6.1) including Phase I risk assessment, PBT screening and mandatory DBS

- Phase I decision tree
- Calculation of Predicted Environmental Concentration (PEC) (including discussion of $F_{pen}$ refinement)
- DBS according to ERA guideline directed at Phase II endpoints, evaluation of retrieved literature for reliability according to CRED method, data gap analysis
- PBT screening including DBS on bibliographically available reliable log $K_{ow}$
- Initiation of log $K_{ow}$ study, if available bibliographic log $K_{ow}$ is not sufficient
- Preparation of Module 1.6.1 (ERA Phase I risk assessment, PBT screening (based on estimated/bibliographic/experimentally determined log $K_{ow}$)); proposal of ERA strategy, including timeline and cost estimation for the relevant Phase II studies

**Timeline: 4 – 6 weeks** *(if log $K_{ow}$ is available)*

*Optional: DBS plus evaluation of Phase II endpoints according to CRED/proposal for ERA testing strategy (if only DBS is needed)*

- DBS according to ERA guideline directed at Phase II endpoints
- Evaluation of retrieved literature for reliability according to CRED method (Moermond et al. 2016)
- Data gap analysis
- Proposal of ERA strategy, including timeline and cost estimation for the relevant Phase II studies

### Data sharing request

- Research of possible data owner(s)/MAH(s)
- Data request at the data owner(s)/MAHs for Letter of Access (LoA) concerning ERA and experimental studies
- Query protocol usable for submission to the competent authority

## B) Phase II Assessment

- Initiation of Phase II experimental studies, monitoring, methodological discussion during study progress with testing facility, study report assessment
- Risk assessment for surface water, sediment and Sewage Treatment Plant (STP), calculation of risk quotients (RQs) for each compartment
- Evaluation whether a risk assessment is necessary for soil compartment, groundwater compartment and secondary poisoning
- Brief summary of each study
- PBT assessment, if necessary
- Preparation of Module 1.6.1, including ERA Phase I and Phase II assessment, PBT assessment

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### Optional services, e.g.,

- Communication with the competent authority in case of potential questions that may arise after submission of the ERA

## C) ERA Phase II studies

### ERA Phase II Tier A (mandatory)

- Octanol/Water Partitioning (OECD 107/123)
- Water Solubility (OECD 105)
- Dissociation in Water (OECD 112)
- Adsorption - Desorption Using a Batch Equilibrium Method (OECD 106)
- Ready Biodegradability Test (OECD 301)
- Algae, Growth Inhibition Test (OECD 201)
- Daphnia sp. Reproduction Test (OECD 211)
- Fish, Early Life Stage (FELS) Toxicity Test (OECD 210)
- Activated Sludge, Respiration Inhibition Test (OECD 209)
- Sediment Toxicity Tests (OECD 218/219 or 225 or 233)

**Timeline: 6 – 9 months**

### ERA Phase II Tier A (optional)

- Aerobic and Anaerobic Transformation in Soil (OECD 307)
- Soil Microorganisms: Nitrogen Transformation Test (OECD 216)
- Terrestrial Plants, Growth Test (OECD 208)
- Earthworm, Reproduction Tests (OECD 222/220)
- Collembola, Reproduction Test (OECD 232)
- Bioaccumulation in Fish (OECD 305)

### Further studies for certain API properties

- Aquatic toxicity: Endocrine Disruptor
  - Fish Sexual Development Test (OECD 234) or
  - Fish (Medaka), Extended One Generation Reproduction Test (OECD 240)

- Phase II Tier B
  - Aerobic Transformation in Aquatic Sediment Systems (OECD 308)

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