Glyceria maxima: Development of an OECD Test Guideline

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Courtesy of Syngenta
Glyceria Work Group – Project History

Objective

• To ring-test a protocol for *Glyceria maxima* in a water-sediment system
• To deliver an OECD Test Guideline
Next steps

Ring-test 3 with Imazapyr

- Rescheduled for Summer 2021
- Objective - Significantly improve CoVs
  - reducing variability in starting plant material
  - increasing standardisation of experimental conditions

Training in plant propagation and experimental techniques

- Workshop: postponed to Spring 2021
  - Hosted by Mesocosm GmbH & GG BioTech Design GmbH; Sponsored by
- Online training videos
  - Request to all participants – if testing *Glyceria* in 2020, please consider sharing videos and/or photographs of work in progress
  - Details of preferred file formats and data platform will follow shortly

OECD Expert Group

- Updated version of protocol circulated for review in April 2020
### Key features of the protocol

<table>
<thead>
<tr>
<th>Test parameter</th>
<th>Ring-test 1: Isoproturon</th>
<th>Ring-test 2: Imazapyr</th>
<th>Ring-test 3: Imazapyr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment phase</td>
<td>3 days</td>
<td>1 day</td>
<td>3-5 days</td>
</tr>
<tr>
<td>Exposure phase</td>
<td>14 and 21 days</td>
<td>14 days</td>
<td>14 days</td>
</tr>
<tr>
<td>Test vessel</td>
<td>Plant pots or beakers</td>
<td>Plant pots with holes</td>
<td>Plant pots with holes; Size will be specified</td>
</tr>
<tr>
<td>Starting material</td>
<td>1-3 shoot per pot</td>
<td>1 shoot per pot</td>
<td>1 shoot per pot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Size will be specified</td>
</tr>
<tr>
<td>Water depth over sediment</td>
<td>3 cm</td>
<td>5 cm</td>
<td>3 cm</td>
</tr>
<tr>
<td>Experimental design</td>
<td>6 control reps &amp; 4 reps of 5 concentrations</td>
<td>6 control reps &amp; 4 reps of 6 concentrations</td>
<td>6 control reps &amp; 4 reps of 6 concentrations</td>
</tr>
<tr>
<td>Assessment parameters</td>
<td>Shoot height, Leaf length (LL), Shoot FW, Shoot DW</td>
<td>Leaf length (LL), Shoot FW, Shoot DW Root FW, Root DW</td>
<td>Leaf length (LL), Shoot FW, Shoot DW</td>
</tr>
<tr>
<td>Test substance analyses</td>
<td>Voluntary</td>
<td>Mandatory: 0, 7 and 14 days</td>
<td>Recommended</td>
</tr>
<tr>
<td>Temperature</td>
<td>22 ± 2°C</td>
<td>23 ± 2°C</td>
<td>22 ± 2°C</td>
</tr>
<tr>
<td>Number of labs</td>
<td>13 labs</td>
<td>11 labs</td>
<td>??</td>
</tr>
</tbody>
</table>
# Acknowledgements

## Workgroup organisers
- Joanna Davies (Syngenta, UK)
- Gertie Arts (Wageningen Environmental Research, NL)
- Johanna Kubitza (BASF SE, DE)
- Rena Isemer (Bayer AG, DE)

## Participating labs
- BASF SE (DE)
- Bayer AG (DE)
- BioChem Agrar GmbH (DE)
- ECT Oekotoxikologie GmbH (DE)
- Eurofins (DE)
- FERA (UK)
- Ibaco GmbH (DE)
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- Mesocosm GmbH (DE)
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- Toxi-Coop (HU)
- Wageningen Environmental Research (NL)

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- Monika Ratte (ToxRat GmbH, DE)
- Funded by ECPA

## Test item supply
- Bayer AG (isoproturon)
- BASF (imazapyr)