

Non-Target Terrestrial Plants

Welcome To Eurofins Agrosience Services

We perform tests on plant protection products (PPPs) that are designed to evaluate the potential effects on seedling emergence and seedling early growth, observing the germination and growth of plant seeds or to evaluate the potential effects on the above-ground portions of plants. Additionally, we can conduct tests using treated soil which are designed to determine the inhibition of growth and reproductive capability of higher plants according to ISO 22030. In accordance with OECD or OCSPP Guidelines, tests are performed under defined conditions in a greenhouse; these studies can be conducted all year round.

Seedling Emergence Test (OECD 208)

This test is designed to evaluate the potential effects of PPPs on seedling emergence and seedling early growth under defined conditions in a greenhouse. After application of the test item by spraying on the soil surface or incorporation of the test item into the soil, the seeds are observed for germination and early growth. The effect of a test item on the seedling emergence and early growth in relation to a control group is determined over a test period of at least 14 days following 50 % emergence in the control. At the end of the observation period, the shoot dry/fresh weight of the above-ground portion of all surviving plants, and the shoot height can be measured. The test can be performed according to the OECD guideline 208, Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test (2006), or the EPA Guideline OCSPP 850.4100 (2012): Seedling Emergence and Seedling Growth.

A dose response or a limit test can be conducted with 1 - 10 species (*monocotyledonous and dicotyledonous species*). If required, a range finder can be conducted prior to the main test. The test comprises up to 9 application rates and a tap water and/or carrier control. Spray application or incorporation in soil is in accordance with OECD Guideline 208 or OCSPP Guideline 850.4100.



Vegetative Vigour Test (OECD 227)

This test is designed to evaluate potential effects of PPPs on the above-ground portions of plants under defined conditions in a greenhouse. The effect on vigour and growth in relation to a control group is determined over a test period of 21 days following application. At the end of the observation period, the shoot dry/fresh weight of the above-ground portion of all surviving plants and the shoot height can be measured. The test can be performed according to the OECD Guideline 227, Terrestrial Plant Test: Vegetative Vigour Test (2006), or the EPA Guideline OCSPP 850.4150 (2012): Vegetative Vigour.

A dose response or a limit test can be conducted with 1 - 10 species (*monocotyledonous and dicotyledonous species*). If required, a range finder can be conducted prior to the main test. The test comprises up to 9 application rates and a tap water and/or carrier control. Spray application to young plants at BBCH-stage 12 - 14 is in accordance with OECD Guideline 227 or OCSPP Guideline 850.4150.

Soil Quality - Biological Methods - Chronic Toxicity In Higher Plants (ISO 22030)

This test is designed to determine the inhibition of growth and reproductive capabilities of higher plants in treated soils under defined conditions in a greenhouse. The duration of the test should be sufficient to include acute as well as chronic endpoints. These endpoints will be the determination of emergence rates, number and biomass of flowers and seeds. The test is performed according to ISO 22030 (2005).

This test is conducted with the two recommended species; (rapid-cycling variant of turnip rape (*Brassica rapa CrGC*) and oat (*Avena sativa*). Typically, seeds are sown in replicate test pots and then harvested at day 14 and also at the end of the test.

By using natural test soil, e.g. from contaminated sites or remediated soil, and by comparing the development of the test plants in these soils with reference or standard control soils, the test can be used to assess soil quality, especially the function of soil as habitat for plants.

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