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| **Document Title:**  Tall oil [*distilled tall oil*], CAS No. 8002-26-4 Determination of Acute Toxicity (EL50) to Daphnia (48 h, Static) |
| **Abstract:**  This study was designed to determine the median effective loading (EL50) of Tall Oil [*distilled tall oil*], CAS No. 8002-26-4 by exposing Daphnia under static conditions to solutions prepared as Water Accommodated Fractions (WAF) at different loading rates. This study was performed based on procedures in OECD (1984) Guideline 202 Part 1 for Testing of Chemicals and following procedures in OECD (2000) Guidance Document No. 23 on Testing Difficult Substances. Tall oil, a dark brown liquid, is a poorly soluble complex mixture. The method of preparation was selected to maximise the solubility of the test item under specific test exposure conditions, but reduce exposure of the test organism to insoluble fractions. The effects of both filtering and adjusting pH were investigated in the range finding test. For both the range finding and definitive-limit tests, the test item was prepared and tested at a temperature appropriate to the test organisms as WAF, up to a maximum loading rate of 1000 mg.l-1. WAF were prepared in 2 litre capacity glass vessels with sidearm, with 2 litres of ASTM Daphnia medium. The vessels were placed on a magnetic stirrer and a stir bar added. The appropriate weight of the test item was added to the stirring medium and the vessels were sealed to avoid loss of volatile fractions. The stirring speed was adjusted to give a stirring vortex 5 - 10 % of the water column. After a stirring period of ca 48 h, the test solutions were allowed to settle for ca 1 h. The WAF was then removed via the sidearm taking care not to remove any undissolved material at the top or bottom of the water column. The test organisms were exposed to the WAF. Following the results of the range finding test, a definitive-limit test was conducted at a maximum initial loading rate of 1000 mg.l 1, with an untreated control. No mortality or other effects were observed in the Daphnia during the study. The 48 h EL50 was > 1000 mg.l 1, the highest loading rate tested. The No Observed Effect Loading Rate (NOELr) was 1000 mg.l 1, under the conditions of the test. During the definitive-limit test, environmental conditions were within the following ranges, pH: 7.68 - 8.44, dissolved oxygen: 84 92 %, temperature: 20.4 22.8 ?C and conductivity: 0.58 0.67 mS. |
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