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[54] **DAPHNIA REPRODUCTIVE BIOASSAY FOR TESTING TOXICITY OF AQUEOUS SAMPLES AND PRESENCE OF AN ENDOCRINE DISRUPTER**

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[58] **Field of Search** 435/4, 29, 967, 435/975

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[57] **ABSTRACT**

The invention provides a Daphnia reproductive bioassay for detecting and confirming the presence of a toxic substance in an aqueous sample, and/or for screening the substance as an endocrine disrupter. According to the assay, a test sample is brought into contact with adult, oviporous Daphnia of a single clone under conditions of crowding and growth conditions to stimulate sexual reproduction and the production of males. The bioassay is based upon the measurement of endpoints that convey quantitative information about the biological activity of the substance: survivorship, numbers of female offspring, numbers of male offspring, number of resting eggs, number of offspring that display developmental deformities or behavioral abnormalities, and nutritional status of the offspring. Also provided are kits for use in conducting the bioassay.

20 Claims, 7 Drawing Sheets