

Keywords: D-optimality; An exponential family; An information matrix; Distribution logical linear mode

Introduction

Toxicological assays are a fundamental and frequently-used method for analysing the effects of chemicals in aquatic environments and determining the safe amounts at which these chemicals will not impair the development of aquatic species [1]. Reproduction is a frequent endpoint in these studies as it tells us about the population dynamics of the species in the ecosystem. Thus, in the presence of various concentrations of the studied chemical, these tests evaluate evolution in the reproduction of the species [2].

Techniques created in the area of optimal experimental design are highly beneficial in this type of controlled experiment. The goal

of (1hJ0.047)3w[(TJ0 Tw T*(3, 4,5).Tj/T10 1 Tf11 0 0 11 42.5905 262.9008 Tm[(S)10(t)5(r)-8(a)15(t)12(e)-3(g)-6.9(i)-6(es f)14(o)10(r o)7(b)8(ta)5(ini

