

喷雾液动态表面张力与雾滴粒径关系Correlations between Dynamic Surface Tension and Droplet Diameter

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关键词: 动态表面张力 雾化 雾滴 体积中径

摘要: 为了描述喷雾液的动态表面张力与雾滴粒径的关系,用粒度分析仪对不同表面张力喷雾液喷雾时形成的雾滴体积中径D50进行了研究,重点考察了喷头尺寸、喷雾压力对D50的影响。结果表明:喷雾液0.023s时的动态表面张力值 $\gamma_{0.023}$ 越低,所形成的雾滴D50越小,D50与 $\gamma_{0.023}$ 呈线性相关;喷雾压力相同时,随着喷头尺寸的增大,喷雾液动态表面张力的改变对雾滴粒径的影响增大;喷头尺寸相同时,随着喷雾压力的增大,喷雾液动态表面张力的改变对雾滴粒径的影响减小。In order to study the relationship between the atomization properties and dynamic surface tension(DST) of pesticide surfactants aqueous solutions, the median volume diameter (D50) of agriculture flat-fan nozzle were measured, with the particular emphasis on the effects of different nozzles and pressures. The results showed that the D50 was correlated linearly with $\gamma_{0.023}$; the D50 increased resulted from DST with the increase of the nozzle type under the same pressure; with the increase of the pressure, the D50 decreased for the same nozzle.

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