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## Preparation and evaluation of Emamectin Benzoate solid microemulsion

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The solid microemulsions of emamectin benzoate with the same content of surfactants were prepared in a self-emulsifying method. Emulsifier 600# and 700# (3/2, w/w) screened from 11 kinds of commonly used surfactants displayed great emulsifying properties. The re-dispersed solution of the solid microemulsion presented aqueous microemulsion characteristic. The mean particle size and polydispersity index were  $10.34 \pm 0.10$  nm and  $0.283 \pm 0.013$ , respectively. The solid microemulsion showed excellent storage stability and the bioassay compared with water dispersible granules against diamondback moths provided a proof of its improved biological activities. This formulation could significantly reduce surfactants and is perspective in plant protection for improving bioavailability and environmental friendliness.

### Biography

Bo Cui's research interest includes "Fabrication, evaluation and application of environment-friendly agricultural inputs". The aims of her research were "To improve the properties of agricultural input, including formulation function, efficacy, duration and environmental friendliness; construction of water-based delivery systems by increasing surface area of agricultural inputs to avoid using harmful solvent and enhance solubility, dispersibility and bioavailability of products and; construction of controlled release systems of agricultural inputs using environment-friendly materials as carriers to extend duration and decrease usage of agrochemical like pesticides, fungicides and herbicides.

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