GreenTap – A Method for Stimulating Production and Extraction of Metabolites in Plants

AgroTech & FoodTech

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A method for inducing and extracting valuable plant metabolites without damaging the plant or interfering with compound formation. This system enables efficient metabolite extraction and facilitates the discovery of new plant-derived compounds, addressing the challenges of complex synthesis and destructive harvesting from natural sources.

GreenTap System

Induction by different molecules and/or conditions of the desired product in one container

Extraction of the desired product in the second container

Side A +
Inducing Agent

Side B +
Extruded Product

APPLICATIONS

- Production of Bioactive Compounds: Increases yield of plant metabolites used in pharmaceuticals, food, and cosmetics.
- Novel Metabolite Discovery: Provides a platform for identifying new plant-based compounds with potential industrial applications.
- Flexible Extraction System: Can be tailored to various plants and metabolites by adjusting stimulants and extraction conditions.

STAGE OF DEVELOPMENT

The system has been tested with numerous plant species to produce and collect a number of metabolites, including alkaloids in tomato plants, taxol and other taxanes in Taxus baccata, and vinca alkaloids in Catharanthus roseus.

ADVANTAGES

Non-Destructive Method: Preserves plant health while allowing continuous metabolite extraction

Optimizable System: Extraction can be fine-tuned for specific compounds, enhancing efficiency and versatility.