Pre-Clinical Study Finds Nanokinetics® Nanoemulsions Deliver Up to 19X Greater Absorption Than an Oil Solution

Pharmacokinetic comparison of liquid and powdered Δ8-THC nanoemulsions against an MCT-oil control is in press at AAPS PharmSciTech.



Nanokinetics Logo

MIAMI, FL, UNITED STATES, September 24, 2026 /EINPresswire.com/ -- MIAMI, FL - Nanokinetics®, a division of Industrial Sonomechanics® and a US-based developer of water-soluble botanical nano-formulations, has completed a pre-clinical pharmacokinetic study comparing two orally administered Δ8-THC nanoemulsions - one liquid, one powdered - with a conventional Δ8-THC solution in MCT oil.

The study addresses one of the most persistent formulation problems in the infused product category: lipophilic bioactives do not dissolve in water, which limits how efficiently the body can absorb them and makes onset slow and variable. Nanokinetics® reformulates those actives as suspensions of nanometer-scale oil droplets, either in water or in a dry water-soluble binder.

Across the comparison, the nanoemulsion formulations substantially outperformed the oil-based control on absorption, with the headline differential reaching 19X. Both the liquid and powdered forms retained the performance advantage, which is significant for manufacturers because powdered nano-formulations open up dry-format applications - tablets, sachets, gummies and capsules - that liquid emulsions cannot serve.

For brands, the practical implication is dose efficiency and consistency: more of the active reaches systemic circulation, and it does so on a predictable timeline rather than the wide,

unreliable window associated with traditional oil-based edibles.

Nanokinetics®, a division of Industrial Sonomechanics®, is a US-based developer and on-demand producer of water-soluble liquid and powdered nano-formulations for the beverage, food and nutraceutical industries. Using a proprietary high-intensity ultrasonic process, the company formulates bioactives that do not dissolve in water - including kratom, kava, hemp, mushroom extracts, berberine, Coenzyme Q10 and piperine - into fast-acting, highly bioavailable, permanently stable water-compatible ingredients. Services include custom formulation development, feasibility testing, contract manufacturing and tolling at both small and large scale. Learn more at nanokinetics.com.



Lion's Mane Extract Powder: Water-Soluble Nano Mushroom Powder, 200 mg/g

> The data shows the delivery system, not the dose, is the variable worth engineering, not piling in more active to offset poor absorption."
> *Alexey Peshkovsky, President & CSO, Nanokinetics, Nanokinetics®*

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