



OXILVA

NATURAL PERFORMANCE ENHANCER

**LIQUID FERTILIZER
COMPATIBLE CAPSULE
SUSPENSION**

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Results shared by AMVAC Chemical Corporation show that the electrolyte tolerance of Exilva® as a rheology modifier when compared to xanthan gum improves the compatibility of a capsule suspension with NPK liquid fertilizers, preventing gelling or precipitation in the tank and allowing mixing all in one.

Results show that when a capsule suspension (CS) structured with Exilva was compared with the same formulation structured with Xanthan Gum, the following observations were made:

- Frequency sweep on the two CS formulations shows that both formulations have solid-like behaviour at 0.5% strain ($G' > G''$).
- Upon mixing the CS formulation with the NPK liquid fertilizer:
 - No precipitation or gelling was observed with the Exilva structured CS formulation
 - Precipitation was observed with the xanthan gum structured CS formulation
- Upon filtering the blend of CS formulation and the NPK liquid fertilizer:
 - Clean and non-clogged sieve/screen was observed with the Exilva structured CS formulation.
 - Precipitate caused clogging of the sieve/screen with the xanthan gum structured CS formulation

Left: Picture of capsule suspensions structured with Exilva and with Xanthan Gum.



Right: Filtering of the capsule suspension and the liquid fertilizer mix. No residues or precipitates observed in the Exilva formulated system, while precipitates exist in the Xanthan Gum formulated system.

Middle: Picture of each capsule suspension (1mL) in the liquid fertilizer (50mL). No precipitation observed in the Exilva formulated system. Precipitation observed in the Xanthan Gum formulated system.

Key takeaways

- ✓ Compatible with high ionic strength systems and improves the compatibility of products with liquid fertilizers.
- ✓ A rheology modifier that improves product stability and compatibility of formulations.
- ✓ A bio-based additive that allows mixing crop protection products with fertilizers and nutrients.