

LECITHIN INSTANTIZING

ADM LECITHIN

Formulators of instant foods face a unique paradox: incorporating difficult-to-disperse materials (fat, proteins, fibres, vitamins and minerals) into a product that can be readily dissolved in cold water, milk or other such aqueous solutions.

High-fat powders are difficult to wet and disperse because they are hydrophobic (try to repel water). High-protein ingredients are hydrophilic (attracted to water) and can hydrate too quickly, forming clumps that do not hydrate internally. These instantising problems can be solved with lecithin from ADM.

Typical lecithin usage levels range from 0.2% up to 10.0% depending on the type of material being instantized. Properties such as Fat and protein content, particle size and desired wetting properties will all determine the proper usage level. Please contact an ADM representative for instantizing recommendations.

INSTANT FOOD APPLICATIONS

- Beverage powders
- Meal replacement shakes
- Soups & gravy mixes
- High protein nutrition beverages
- Powdered dairy and non-dairy products
- Other applications
- Dry infant formulas



The instantising effect of a lecithinated whole milk replacer in an instant beverage mix.



INSTANTIZING

Instantizing with lecithin is usually accomplished by spray coating the lecithin onto a powder's surface. ADM offers a number of liquid lecithins for this purpose, in particular Yelkin® and the Beakin™ series of complexed lecithins.

However, ADM also produces Ultralec™ ultrafiltered, deoiled lecithin. Ultralec is the product of an exclusive ultrafiltration process that removes triglycerides from lecithin, leaving it dry and easy to mix. Its outstanding quality and purity has no off-flavors or aromas, so it maintains the integrity of instant food products. Ultralec is available in powdered, granular or fine granular forms.

RECOMMENDED ADM LECITHINS

- Ultralec: ADM's exclusive, ultrafiltered, deoiled lecithin is used in hydrophilic instantising applications and provides excellent emulsification properties in reduced-fat and flavour-sensitive applications.
- Beakin: A series of complexed lecithin products with low viscosity, sprayable at ambient temperature, and used in lipophilic instantising applications.
- Performix™ blends are excellent oil in water emulsifiers with a high HLB. Performix E is an ideal product for applications that include instantizing fatty powders, such as milk powders and calf milk replacers.
- Yelkin: Series of standardised lecithins that provide moisture retention and emulsification in high-viscosity applications.



For customers around the world, ADM draws on its resources—its people, products, and market perspective—to help them meet today's consumer demands and envision tomorrow's needs.

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DEOILED LECITHINS			
Product	Typical Analyses		
ULTRA-FILTERED DEOILED LECITHINS			
Ultralec® P	AI, % 97 min. H2O, % 1.5 max.	Color: Light gold Form: Powder	Viscosity: N/A
Ultralec F	AI, % 97 min. H2O, % 1.5 max.	Color: Light Gold Form: Fine granules	Viscosity: N/A

FLUID LECITHINS			
Product	Typical Analyses		
COMPLEXED LECITHINS			
Beakin® LV1	AI, % 50 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 25 max. Form: Translucent fluid	Viscosity: 20 max. (Stokes, 25°C)
Beakin LV3	AI, % 32 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 25 max. Form: Translucent fluid	Viscosity: 10 max. (Stokes, 25°C)
Beakin LV30	AI, % 32 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 25 max. Form: Translucent fluid	Viscosity: 10 max. (Stokes, 25°C)
Performix™ CC	AI, % 50 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 28 max. Form: Translucent fluid	Viscosity: 30 max. (Stokes, 25°C)
Performix™ E	AI, % 50 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 26 max. Form: Translucent fluid	Viscosity: 30 max. (Stokes, 25°C)
Performix PS	AI, % 50 min. H2O, % 0.8 max. HI, % 0.05 max.	Color: 14 max. AV: 26 max. Form: Translucent fluid	Viscosity: 65 max. (Stokes, 25°C)

MODIFIED LECITHINS			
Yelkin 1018	AI, % 58 min. H2O, % 1.0 max. HI, % 0.05 max.	Color: 17 max. AV: 38 max. Form: Opaque fluid	Viscosity: 250 max. (Stokes, 25°C)

PURIFIED LECITHIN			
Yelkin Gold	AI, % 62 min. H2O, % 0.5 max. HI, % 0.05 max.	Color: 14 max. AV: 30 max. Form: Translucent fluid	Viscosity: 100 max. (Stokes, 25°C)

STANDARD LECITHINS			
Yelkin TS	AI, % 62 min. H2O, % 1.0 max. HI, % 0.05 max.	Color: 17 max. AV: 30 max. Form: Translucent fluid	Viscosity: 100 max. (Stokes, 25°C)
Yelkin SS	AI, % 62 min. H2O, % 1.0 max. HI, % 0.05 max.	Color: 14 max. AV: 30 max. Form: Translucent fluid	Viscosity: 100 max. (Stokes, 25°C)
Yelkin DS	AI, % 62 min. H2O, % 1.0 max. HI, % 0.05 max.	Color: 12 max. AV: 30 max. Form: Translucent fluid	Viscosity: 100 max. (Stokes, 25°C)