

MANUFACTURING PROCEDURE (LABORATORY SCALE)

Emulsion Systems:

1. Incorporate ProBiocin V® near the end of the formulating process and after the formulation has cooled to below 40°C.

Surfactant Systems:

1. ProBiocin V® has excellent compatibility in cationic, amphoteric, and nonionic surfactant systems when added towards the end of the formulating process after the formulation has cooled to below 40°C.
2. In anionic surfactant systems, add ProBiocin V® after the anionic surfactant. Incorporate a thickening agent if a loss in viscosity is observed.

Gel/Aqueous Systems:

1. ProBiocin V® has excellent compatibility in cationic and nonionic gel/aqueous systems when added towards the end of the formulating process after the formulation has cooled to below 40°C.
2. The cationic nature of ProBiocin V® makes the main formulating concern incompatibility with highly anionic thickeners. In anionic systems, a change in order of addition may best resolve incompatibility. See Formulation Advice below for more information on specific anionic thickeners.

Application Ideas:

1. ProBiocin V® is suitable for O/W emulsions, W/O emulsions, and aqueous systems.

Formulation Advice:

Use Level	Our best recommendation is to start with 4.0% ProBiocin V® if no other antimicrobial active or preservative system is present.
Overcoming Incompatibilities	When using Xanthan Gum : <ul style="list-style-type: none"> • Charge water, add ProBiocin V® into water and allow to mix uniform. • Pre-disperse Xanthan Gum in a polyol and add. Continue mixing until uniform.
	When using Hyaluronic Acid (Low/High MW) <ul style="list-style-type: none"> • Charge water, add ProBiocin V® and allow to mix until uniform. • Under high shear mixing, add hyaluronic acid.
	When using Carbomer systems: <ul style="list-style-type: none"> • Recommended use level for a gel is 0.5-1.0% of carbomer with 2-4% ProBiocin V® respectively. • Add at end of processing when Carbomer has been neutralized. Decrease concentration of ProBiocin V® to improve clarity. Solubilizer does not help. • Increasing pH to 6.0-7.0 also aids in compatibility.
Improve Clarity	When a lipophilic peptide such as ProBiocin V® interacts with an anionic material, haze may be observed. Add a solubilizer to improve clarity.

ProBiocin V®

Code: FSSM14005

INCI Name: Lactobacillus Ferment Lysate

CAS#: 68333-16-4 [AICS, Revised ICL] (or) 92128-79-5 [PICCS]

EINECS#: N/A (or) 295-777-8

Suggested Use Levels: 2.0 - 4.0%

**Solubility: 100% Water Soluble
Alcohol Soluble**

pH Stability: 3 - 7