

PhytoCide Black Currant Powder Formulation Guidance

Manufacturing Procedure (Laboratory Scale)

Emulsion Systems:

1. Incorporate PhytoCide Black Currant Powder into the water phase.

Surfactant Systems:

1. PhytoCide Black Currant Powder has excellent compatibility in cationic, amphoteric, and nonionic surfactant systems when added into the water phase.
2. In anionic surfactant systems, add PhytoCide Black Currant Powder after the anionic surfactant. Incorporate a thickening agent if a loss in viscosity is observed.

Gel/Aqueous Systems:

1. PhytoCide Black Currant Powder has excellent compatibility in cationic and nonionic gel/aqueous systems when added into the water phase.
2. The cationic nature of PhytoCide Black Currant Powder makes the main formulating concern incompatibility with high anionic thickeners. In anionic systems, a change in order of addition may be best to resolve incompatibility. See Formulation Advice below for more information on specific anionic

Application Ideas:

1. PhytoCide Black Currant Powder is suitable for O/W emulsions, W/O emulsions, and aqueous systems.

Formulation Advice:

Use Level	Our best recommendation is to start with 3.0% PhytoCide Black Currant Powder 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 PhytoCide Black Currant Powder into water and allow to mix until completely dissolved.• Pre-disperse xanthan gum in a polyol and add.
	When using Hyaluronic Acid (Low/High MW): <ul style="list-style-type: none">• Charge water, add PhytoCide Black Currant Powder and allow to mix until completely dissolved.• Under high shear mixing, add hyaluronic acid.
	When using Carbomer systems: <ul style="list-style-type: none">• Add at end of processing when carbomer has been neutralized. Decrease concentration of PhytoCide Black Currant Powder to improve clarity. Solubilizer does not help.• Increasing pH to 6.0 also aids in compatibility.
Improve Clarity	When PhytoCide Black Currant Powder interacts with an anionic material, haze may be observed. Add a solubilizer to improve clarity.

PhytoCide Black Currant Powder
Code: FSSM16001
INCI Name: Ribes nigrum (Black Currant) Fruit Extract
CAS#: 68606-81-5
EINECS#: 271-749-0
Suggested Use Levels: 1.00 - 3.00%
Solubility: Partially Water Soluble
pH Stability: 3 - 6

