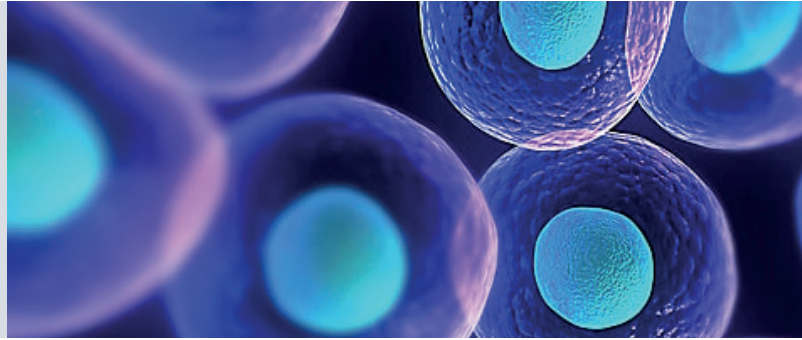


Sclerothix® – FACT SHEET

Sclerothix® is a 100% natural-origin water thickener which makes transparent, rich, smooth gels suitable for a variety of uses including suspending particles and thickening some surfactant systems. It can be used on its own or as part of an emulsion or surfactant formula.



TECHNICAL INFORMATION

INCI	Xanthan Gum, Sclerotium Gum, Algin
Origin	Vegetable based (via fermentation), Non Palm derived, Vegan, non GMO
Certification	100% Natural origin (ISO 16128), COSMOS Approved
Appearance	White Powder

FORMULATING DETAILS

How to use Sclerothix® can be used in hot or cold water but dispersing in hot water minimises trapped air, giving it an immediately smooth and transparent appearance. Heat water to 75 °C and sprinkle on Sclerothix®, then mix using a homogeniser to fully hydrate the powder. To prevent lumps from forming and to speed up the process, pre-mix powder in a small amount of glycerin.

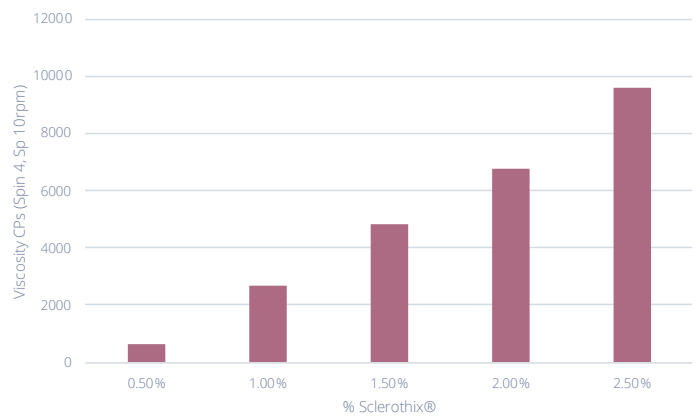
Tips Keep pH between 3 and 10. Sclerothix® gels will tolerate up to 3% of NaCl and 30% Ethanol. The gel formed may contain air making it look cloudy, this should clear within 24 hours. If using in a surfactant formulation, make the gel first and then gently stir in surfactant to prevent excess air being entrapped. Preserve formulations well as gels are susceptible to microbial contamination.

RECOMMENDED USE LEVEL

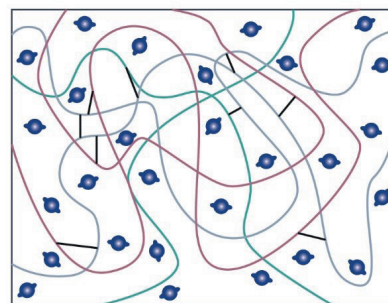
To make a water gel	1 - 2.5%
In an emulsion	0.5 - 2%
To thicken surfactants	0.5 - 1.5%

VISCOSITY DATA

Viscosity v % of Sclerothix® in water (dispersed hot)



There is a gradual increase in viscosity with an increase in the % of Sclerothix® used. A level of between 1 and 2.5% depending on application is recommended.



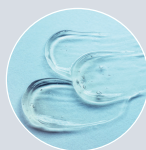
INTERNAL STRUCTURE OF SCLEROTHIX

- Xanthan Gum
- Sclerotium Gum
- Algin
- Water Molecule
- Cross linking between and within polysaccharide chains

APPLICATIONS



Eye gels



Facial gels



Serums



Emulsions



Facial or body wash

Sclerothix®



COMPATIBILITY WITH SURFACTANTS (1% SCLEROTHIX®)

Surfactant	% Solids in final formulation	Appearance and Stability	Viscosity after 3 wks (CPs) Spindle 4, 10rpm
Cocamidopropyl Betaine	7	Transparent, smooth, stable	6980
Sodium Lauroyl Sarcosinate	6	Transparent, smooth, stable	8770
Decyl Glucoside	10	Transparent, smooth, stable	5860
Caprylyl/Capryl Glucoside	14	Transparent, smooth, stable	6950

RHEOLOGY

Sclerothix® gels have a unique rheology as they are smooth, but able to suspend and stabilise. The rheology is comparable with carbomer (Carbopol® Ultrez 20) as shown in the graphs.

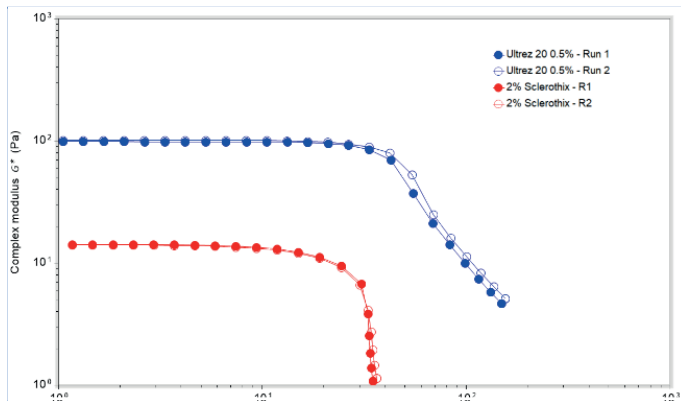


Figure 1: Complex Modulus (Pa) (Measure of rigidity) v Oscillation Stress (Pa)

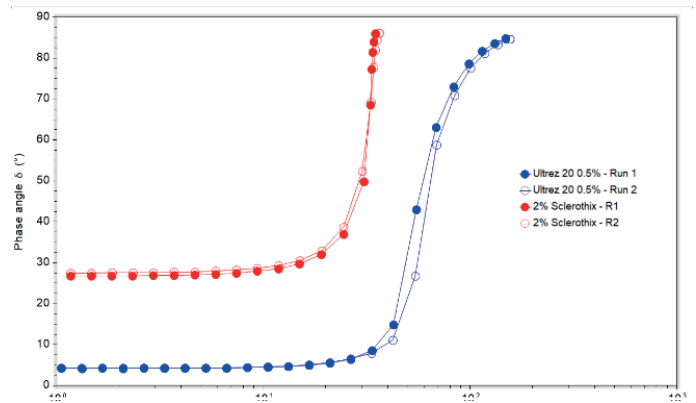


Figure 2: Phase Angle (°) (Measure of elasticity) v Oscillation Stress (Pa)

PARTICLES SUSPENDED IN A 2% SCLEROTHIX® GEL



Pearl mica



Red loofah



Lemongrass



Gold mica



Calendula flowers