GlyAcid®
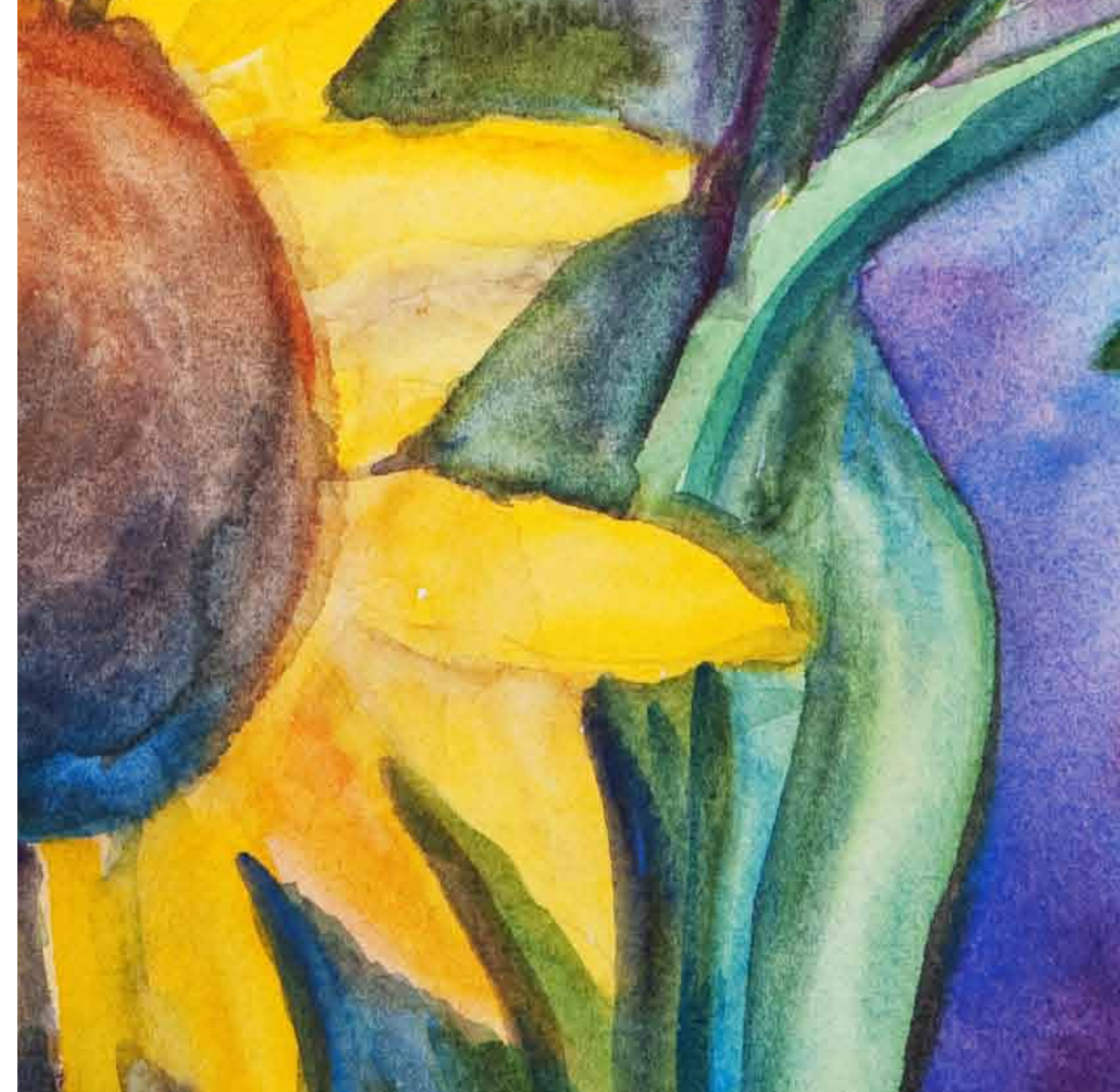glycolic acid

formaldehyde free

CROSSCHEM
PURE CHEMISTRY

Pure Chemistry

Purity is a fundamental strategy at CrossChem and inherent to the GlyAcid® product line. Our unique chemistry and purification process creates a new benchmark for personal care formulations.

GlyAcid® Technology

For more than 40 years, glycolic acid has been predominately produced by either the carbonylation of formaldehyde or with glycolonitrile as a starting material. Both processes leave residual traces of formaldehyde in the finished commercial product.

By contrast, CrossChem's GlyAcid® is produced using a proprietary acid saponification and purification process that does not use formaldehyde in the process while delivering a high purity glycolic acid in 57% solution, 70% solution and 99% crystalline.

GlyAcid®
glycolic acid
formaldehyde free

Glycolic Acid In Personal Care

Skin Care | Glycolic acid is the smallest molecule in the alpha hydroxy acid family. Due to its small molecular size, glycolic acid has proven more effective in helping to release the bonds holding together the top skin cell layers. By removing these old skin cells, the body uncovers fresher, more youthful skin.

Nail & Hair Care | Glycolic acid continues to see growth in nail and hair care formulations. Nail care benefits include cuticle softening and facilitates healthier looking nails. Hair care benefits include improved manageability, making hair feel softer and easier to style.

GlyAcid®
glycolic acid
formaldehyde free

FTIR Spectrum

Glycolic Acid Standard

Glycolic acid is actually an equilibrium between glycolic acid and glycolide (1,4-dioxane-2,5-dioine). This equilibrium is evident in the IR by the two peaks found in the carbonyl region at 1720 cm^{-1} and 1630 cm^{-1}.
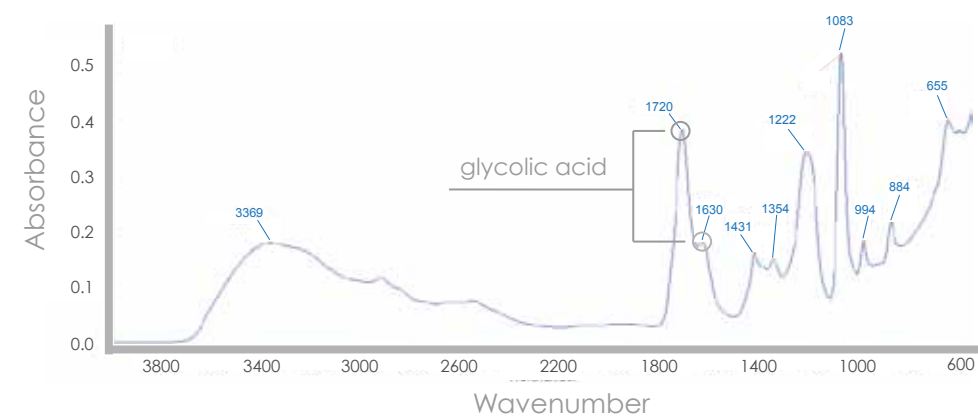

FTIR Spectrum

Comparative Overlay

To ensure formulation consistency and efficacy, we compared the FTIR spectrum of three CrossChem GlyAcid® lots with a leading competitor. As shown in the overlay below, GlyAcid® possesses an identical infrared spectrum.

Upgrade to GlyAcid® with confidence and eliminate unwanted impurities in your personal care fomulations.
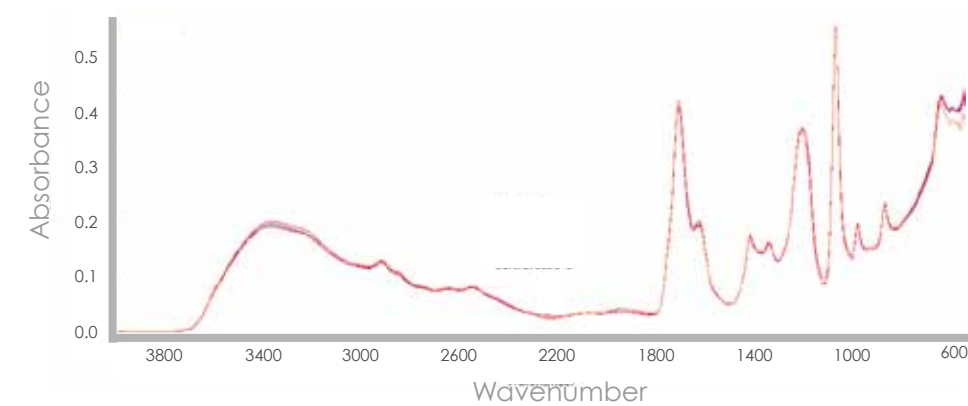
GlyAcid® 57 HP

GlyAcid® 57 HP is a high purity glycolic acid in a 57% aqueous solution. It is a clear, virtually colorless liquid with a mild burnt sugar odor.

Packaging: 250 Kg Drums

SPECIFICATIONS

Property	Limits	Typical Results	Analytical Method
Total Acid %	56 - 58	57.1	WQTM - 13
Free Acid %	52 - 54	52.7	WQTM - 13
Color (APHA)	15 Max	8	WQTM - 03
Formaldehyde mg/Kg	Report	U*	WQTM - 08

*U: Undetectable - tests show property not detected. Appearance: Clear liquid

Stability: GlyAcid® 57 HP is stable when stored under normal conditions. If stored at temperatures below 14C (57F), precipitation may occur. This precipitation does not affect product quality. To re-dissolve, heat product to 40C (104F) with agitation.

PHYSICAL PROPERTIES

Property	Value
Formula	$HOCH_2COOH$
Precipitation Point, C (F)	14 (57)
Molecular Weight	76.05
pH, 25C (77F)	0.4
Density @ 15.6 (60F), lbs/gal	10.5
g/Ml (Mg/m3)	1.27

GlyAcid
glycolic acid
formaldehyde free

GlyAcid® 70 HP

GlyAcid® 70 HP is a high purity glycolic acid in a 70% aqueous solution.
It is a clear, virtually colorless liquid with a mild burnt sugar odor.

Packaging: 25 Kg Pails and 250 Kg Drums

SPECIFICATIONS

Property	Limits	Typical Results	Analytical Method
Total Acid %	70 - 72	71.1	WQTM - 13
Free Acid %	63 - 66	64.7	WQTM - 13
Color (APHA)	15 Max	8	WQTM - 03
Formaldehyde mg/Kg	Report	U*	WQTM - 08

*U: Undetectable - tests show property not detected. Appearance: Clear liquid

Stability: GlyAcid® 70 HP is stable when stored under normal conditions. If stored at temperatures below 14C (57F), precipitation may occur. This precipitation does not affect product quality. To re-dissolve, heat product to 40C (104F) with agitation.

PHYSICAL PROPERTIES

Property	Value
Formula	HOCH2COOH
Precipitation Point, C (F)	14 (57)
Molecular Weight	76.05
pH, 25C (77F)	0.4
Density @ 15.6 (60F), lbs/gal	10.5
g/Ml (Mg/m3)	1.27

GlyAcid
glycolic acid
formaldehyde free

GlyAcid® 99 HP

GlyAcid® 99 HP is a high purity glycolic acid in 99% crystalline form. Applications include anhydrous formulations or where water is minimized.

Packaging: 20 Kg Fiber Drum

SPECIFICATIONS

Property	Limits	Typical Results	Analytical Method
Total Acid %	99 Min	99.3	WQTM - 14
Formaldehyde mg/Kg	Report	U*	WQTM - 08

*U: Undetectable - tests show property not detected. Appearance: Clear crystal

PHYSICAL PROPERTIES

Property	Value
Formula	HOCH2COOH
Molecular Weight	76.05
State of Matter	Solid
Melting Point C(F)	77 (171)
pH	NA

GlyAcid®
glycolic acid
formaldehyde free

CrossChem LP
5816 Dryden Place Ste 200
Carlsbad CA 92008 USA

T +1 (619) 578-0021
F +1 (619) 578-0022

www.crosschem.net/glycolicacid