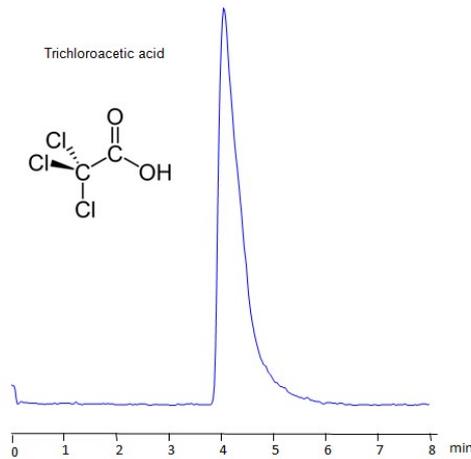


HPLC MS Method for Analysis of Trichloroacetic acid (TCA) on BIST A+ Column



Column:	BIST A+
Column size:	2.1 × 100 mm, 3 µm
Column part number:	TAP-21.100.0310
Mobile phase:	MeCN- 90%
Buffer:	TMDAP formate - 5 mM pH 4.0
Flow rate:	0.2 mL/min
Detection:	SIM 161 -
Sample:	0.1 µl/ml in MeCN
LOD:	2 ppb

Separation type: Liquid Chromatography Reversed-phase

Trichloroacetic acid (TCA) is a chemical compound with the formula CCl_3COOH . It is a strong organic acid and a derivative of acetic acid, where three of the four hydrogen atoms in the methyl group of acetic acid are replaced by chlorine atoms.

Trichloroacetic acid is commonly used in various applications, including:

Chemical Synthesis: TCA serves as a reagent in various chemical reactions, such as the production of pharmaceuticals, dyes, and pesticides.

Protein Precipitation: In biochemistry and molecular biology, TCA is often used for the precipitation of proteins from solution. It is particularly useful for removing proteins from samples for further analysis.

Skin Care: TCA is also used in dermatology as a peeling agent to treat various skin conditions, including acne scars, sun damage, and wrinkles. It promotes exfoliation and the regeneration of skin cells.

DNA and RNA Precipitation: TCA is employed to precipitate nucleic acids (DNA and RNA) from solution, facilitating their isolation and purification in molecular biology experiments.

Trichloroacetic acid is corrosive and should be handled with care.

Trichloroacetic acid can be retained and analyzed on a BIST A+ column using an analytical method with a simple mobile phase of water, Acetonitrile (MeCN), and a TMDAP formate as a buffer. This analysis method can be detected using LC MS.

Method Parameters

Column	BIST A+, 2.1 x 100 mm, 3 µm, 100 Å, dual ended
Mobile Phase	MeCN/H ₂ O – 90/10%
Buffer	TMDAP formate – 5 mM pH 4.0
Flow Rate	0.2 mL/min
Detection	SIM161-
Sample	0.1 µl/ml

Quelle: <https://sielc.com/hplc-ms-determination-of-tca>