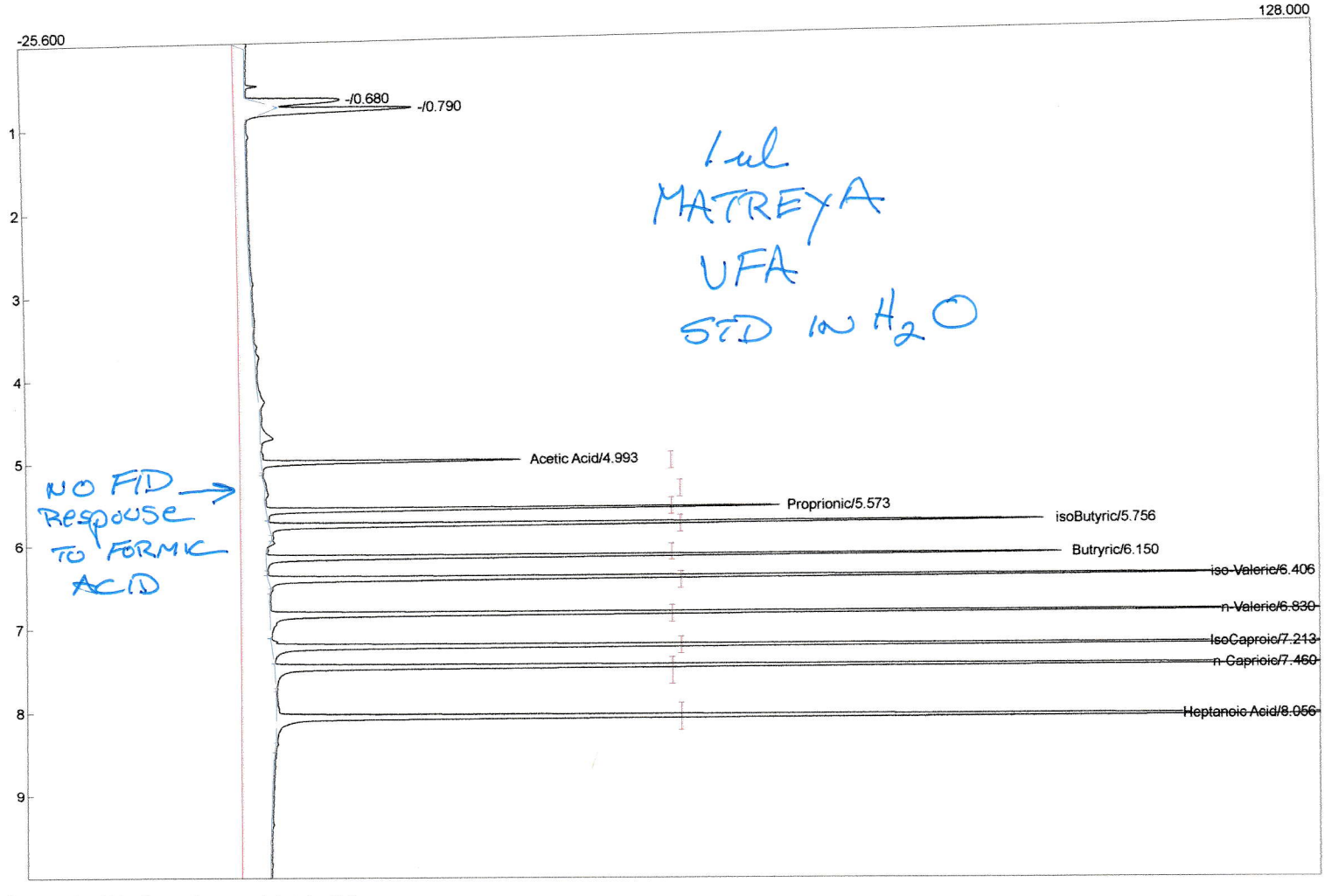
Lab name: SRI Instruments
Client: SRI Final
Client ID: N10984
Analysis date: 05/19/2023 15:13:15
Method: 1ul syringe on-column
Description: FID 150C medgain
Column: 30MXTwax
Carrier: H2@10psi
Integration: Peak sens=95.0 Base sens=60.0 Min area= 10.00 Standard= 4.000 Sample=100.000 Tangents=off
Data file: Techno977.CHR ()
Sample: Matreya VFA std

Temperature program:

Init temp	Hold	Ramp	Final temp

Events:

Time	Event



Component	Retention	Area	Internal	Units
Acetic Acid	4.993	62.9138	0.0000	ppm
Proprionic	5.573	122.1691	0.0000	ppm
isoButyric	5.756	191.7102	0.0000	ppm
Butyric	6.150	187.8238	0.0000	ppm
iso-Valeric	6.406	250.5653	0.0000	ppm
n-Valeric	6.830	262.5080	0.0000	ppm
IsoCaproic	7.213	318.5742	0.0000	ppm
n-Caprioic	7.460	327.5228	0.0000	ppm
Heptanoic Acid	8.056	388.7453	0.0000	ppm
		2112.5325	0.0000	

MATREYA LLC
Lipids and Biochemicals
A Cayman Chemical Company

PRODUCT DATA SHEET

Volatile Acid Mixture (qualitative)

Catalog No: 1075
Solvent: DI Water
Storage: 4-8°C
Concentration: various
Quantity: 100ml

GC Conditions:
Column: Nukol 30m x 0.53mm
Carrier Gas: helium
Make-up Gas: helium
Split Ratio: 10:1
Oven Initial: 100°C
Oven Final: 200°C
Detector: FID, 230 °C

Linear Velocity: 17cm/sec
Flow Rate: 40ml/min
Vent Flow: 70ml/min
Program Rate: 8°C/min
Hold Time: 2.5 min
Injector: 230°C

Components:
Formic acid
Acetic acid
Propionic acid
Isobutyric acid
N-butyric acid
Isovaleric acid
N-valeric acid
Isocaproic acid
N-caproic acid
Heptanoic acid

Application Notes:
This mixture contains ten volatile fatty acids and is ideal for their identification by gas chromatography, mass spectrometry, and high performance liquid chromatography and is prepared from high purity stock materials. Knowledge of the fatty acid content of bacteria, for example, can be of great benefit in understanding microbials and can be of great nutritional importance in animals and humans.[1,2,3] This is a qualitative mixture and should not be used for quantitative purposes.

Selected References:

1. M. Or-Rashid, N. Odongo and B. McBride, "Fatty acid composition of ruminal bacteria and protozoa, with emphasis on conjugated linoleic acid, vaccenic acid, and odd-chain and branched-chain fatty acids" *Journal of Animal Science,* Vol. 85 pp. 1228, *2007*
2. Y. Zhang, S. White, and C. Rock "Inhibiting Bacterial Fatty Acid Synthesis" *The Journal of Biological Chemistry,* Vol. 281(26) pp. 17541, *2006*
3. N. Rozès et al. "A rapid method for the determination of bacterial fatty acid composition" *Applied Microbiology,* Vol. 3(17) pp. 126, *1993*