

Sample Received: 1/14/2019

Report Date: 1/16/2019

CRUDE OIL

Residual Solvent Test Report

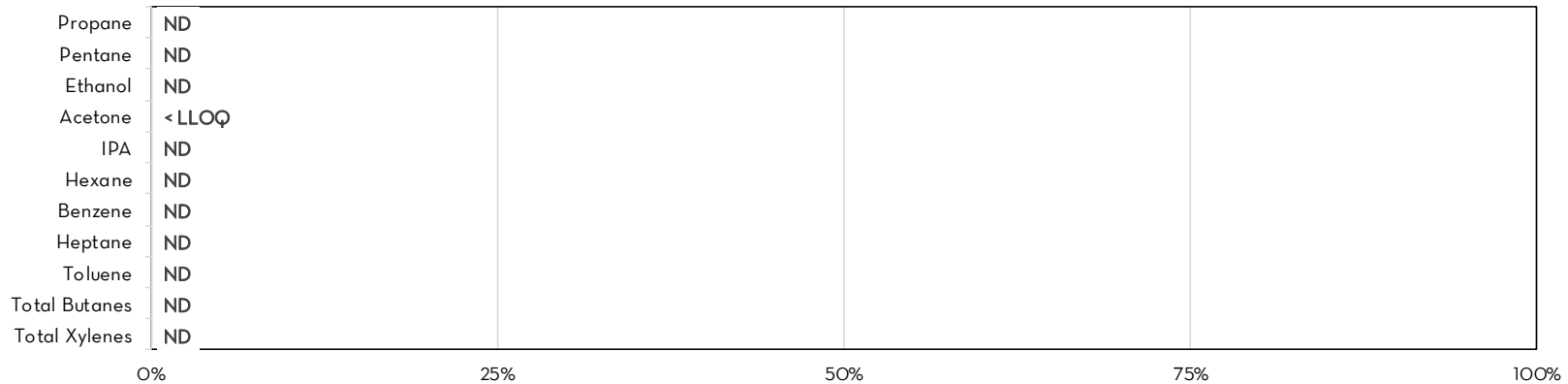
METRC No. 1A4000712681097000000059

Sample: **GY225H-C** (Concentrate)

Harvest/Production Batch: Crude_25OF_O11119

Item Notes:

PERCENT OF REGULATED LIMIT



iso-Butane	n-Butane	Total Butanes	Propane	Pentane	Ethanol	Acetone	IPA	Hexane	Benzene	Heptane	Toluene	m/p-Xylene	o-Xylene	total xylenes
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ND	ND	ND	ND	ND	ND	< LLOQ	ND	ND	ND	ND	ND	ND	ND	ND
Limit / ppm		1000	1000	1000	1000	1000	1000	60	2	1000	180			430
% of limit		ND	ND	ND	ND	< LLOQ	ND	ND	ND	ND	ND			ND

ND = not detected. Values below the lower limit of quantitation (LLOQ) are outside the range of accuracy and are shown as <LLOQ. Values above the upper limit of quantitation (ULOQ) are outside the range of accuracy and are shown as >ULOQ.

Limits of quantitation for isobutane and butane = 64.75 - 3885.0 ppm; propane = 49.25 - 2955.0; pentane = 250.4 - 7512.0; ethanol = 212.4 - 6373.15; acetone = 212.5 - 6373.92; IPA = 189.25 - 5677.5; heptane = 213.2 - 6397.1 ppm; benzene = 0.92 - 13.8 ppm; hexane = 13.4 - 402.8 ppm; toluene = 34.68 - 1040.4 ppm; and xylenes = 89.99 - 2699.55 ppm.

PASS

ISO/IEC-17025

LABORATORY TESTING ACCREDITED | CERTIFICATE #4690-01



Authorized by: Anna Ettinger, Lab Director



RESIDUAL SOLVENT TESTING

The Colorado Department of Revenue - Marijuana Enforcement Division (MED) currently requires residual solvent analysis of cannabis extracts and concentrates using solvents for cannabinoid extraction. This residual solvent testing ensures consumer safety in cannabis concentrates from harmful health effects associated with these solvents.

The residual solvent limits enforced by the MED as of 02/01/2018 are as follows:

Propane	less than 1000.0 parts-per-million (ppm)	Toluene	less than 180.0 ppm
Pentane	less than 1000.0 ppm	Hexane	less than 60.0 ppm
Ethanol	less than 1000.0 ppm	Total Xylenes	less than 430.0 ppm
Acetone	less than 1000.0 ppm	Total Butanes	less than 1000.0ppm
Isopropyl Alcohol (IPA)	less than 1000.0 ppm	Heptanes	less than 1000.0 ppm
Benzene	less than 2.0 ppm		

RM3 LABS RESIDUAL SOLVENT TESTING METHODS

At Rm3 Labs we use a testing methodology known as Headspace Gas-Chromatography with Flame Ionization Detection, or headspace GC-FID. This method is widely used in the environmental and pharmaceutical industries to analyze for product or environmental contamination. For each test, the client provides us a small sample of the product. We heat the sample in an airtight vial to vaporize the residual solvents, sample the headspace in the vial and inject this headspace sample into the gas chromatograph for chemical analysis. In analyzing sample headspace, we screen out various matrix interferences present in the concentrate.

THE LIMITATIONS OF OUR TEST METHODS

We do not test an entire "batch" of product; we only test the sample provided by the client. When testing cannabis concentrates and extracts, we ask for as representative a sample as possible; however, it is possible that the product received by a patient may be materially different from the sample we've tested.

Rm3 Labs tests for residual solvents specified in the MED contaminant testing regulations only and therefore other residual solvents may be present other than the solvents listed in this report.

There are currently no established protocols for cannabis testing in the U.S. As a result, each lab uses its own procedures, and results from different labs may not be directly comparable.

Results of our tests, and this report, may be used or displayed only by the client and only in connection with the batch of product from which the test sample was taken. By submitting a sample for analysis, the client has represented that product from which the sample has been taken is being held by the client in full compliance with Colorado state and local medical cannabis laws, and such product or any product made therefrom will only be offered for sale in compliance with such laws.