

# Roar Vapor LLC

367 Vann Drive  
Jackson, TN 38305

Carbonyl Assay  
Samples Received 3/13/15

Product Name  
*Raging Bitch*

Analysis Report  
(0315-535)

HPLC/UV Analysis For:  
Diacetyl  
2,3-Pentanedione (aka: Acetyl Propionyl)



**Enthalpy Analytical, Inc.**

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / [www.enthalpy.com](http://www.enthalpy.com)  
800-1 Capitola Drive Durham, NC 27713-4385



Company:	Roar Vapor LLC
Sample Condition:	Samples received in good condition.
Notes:	Chain of custody verified.

Method / SOP	Analyte(s)
ENT301	Diacetyl
	2,3-Pentanedione (aka: Acetyl Propionyl)

**Summary of Method:**

An aliquot of e-liquid and/or e-liquid flavors is derivatized with 2,4-dinitrophenylhydrazine (DNPH). After the derivitization reaction is complete, samples are neutralized with pyridine and analyzed via HPLC with a UV detector.

In this analysis, the limit of detection is 0.279 ug/mL for 'Diacetyl' and 0.281 ug/mL for '2,3-Pentanedione'.

Company	Roar Vapor LLC	# Samples	1
Analyst	BJB	Sample(s) Received	3/13/15
Instrument Type	HPLC/UV	Client Project:	2
Job #	0315-535		

Enthalpy Code	Sample Name	Batch	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0315-535-09	Raging Bitch	N/A	Not Detected	3.91 J

**QC Notes:**

J: Result is below the Lower Curve Limit, above the MDL, and is considered an estimate.

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized.

This analytical report was prepared in Portable Document Format (.PDF) and contains 2 pages.

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