

# Baker White Inc.

6111 Hwy 10 NW Suite 300  
Ramsey, MN 55303

## Carbonyl Assay Samples Received 08/25/2014

Product Name  
*101 - 2 0mg*

## Analysis Report (0814-174)

HPLC/UV (ENT301) 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:	Baker White Inc.
Sample Condition:	Samples received in good condition.
Notes: <i>Chain of custody verified.</i>	

Method / Parameter	Analyte(s)
HPLC/UV (ENT301) Analysis	Diacetyl
	2,3-Pentanedione (aka: Acetyl propionyl)

**Summary of Method:**

A measured volume of sample is combined with a volume of acetonitrile. A known amount of internal standard (Butanedione-d6) is added and the vial is capped and mixed thoroughly to combine. An aliquot is then analyzed quantitatively against a linear calibration curve using a GC/MS equipped with a mass selective detector. In this analysis, the limit of detection is 0.3 ug/mL for 'Diacetyl' and 0.31 ug/mL for '2,3-Pentanedione'.

Company	Baker White Inc.		
Analyst	01	# Samples	1
Parameters	HPLC/UV (ENT301) Analysis	Sample(s) Received	08/25/2014
Job #	0814-174	Client Project:	Round 2

Enthalpy Code	Sample Name	Client's Sample ID	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0814-174-06	101-2 0mg		Not Detected	Not Detected

**QC Notes:**

'Diacetyl' and '2,3-Pentanedione' were not detected above the minimum detection limit.

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.

QA Review Performed by - Emil W. Stewart

Report Issued: 09/26/2014



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# Baker White Inc.

6111 Hwy 10 NW Suite 300  
Ramsey, MN 55303

## Carbonyl Assay Samples Received 07/23/2014

Product Name  
*103 - 0mg*

Analysis Report  
(0714-177)

GC / MS Analysis For  
Diacetyl  
2,3-Pentanedione (aka: Acetyl propionyl)



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Company:	Baker White Inc.
Sample Condition:	Samples received in good condition.
Notes: <i>Chain of custody verified.</i>	

Method / Parameter	Analyte(s)
GC / MS Analysis	Diacetyl
	2,3-Pentanedione <i>(aka: Acetyl propionyl)</i>

**Summary of Method:**

A measured volume of sample is combined with a volume of acetonitrile. A known amount of internal standard (Butanedione-d6) is added and the vial is capped and mixed thoroughly to combine. An aliquot is then analyzed quantitatively against a linear calibration curve using a GC/MS equipped with a mass selective detector. In this analysis, the limit of detection is 0.34 ug/mL for 'Diacetyl' and 0.41 ug/mL for '2,3-Pentanedione'.

Company	Baker White Inc.	# Samples	1
Analyst	01	Sample(s) Received	07/23/2014
Parameters	GC / MS Analysis	Client Project:	T1
Job #	0714-177		

Enthalpy Code	Sample Name	Client's Sample ID	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0714-177-37	103-0mg	-	Not Detected	Not Detected

**QC Notes:**

'Diacetyl' and '2,3-Pentanedione' were not detected above the minimum detection limit.

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# Baker White Inc.

6111 Hwy 10 NW Suite 300  
Ramsey, MN 55303

## Carbonyl Assay Samples Received 07/23/2014

Product Name  
*105 - 0mg*

Analysis Report  
(0714-177)

GC / MS Analysis For  
Diacetyl  
2,3-Pentanedione (aka: Acetyl propionyl)



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Company:	Baker White Inc.
Sample Condition:	Samples received in good condition.
Notes: <i>Chain of custody verified.</i>	

Method / Parameter	Analyte(s)
GC / MS Analysis	Diacetyl
	2,3-Pentanedione <i>(aka: Acetyl propionyl)</i>

**Summary of Method:**

A measured volume of sample is combined with a volume of acetonitrile. A known amount of internal standard (Butanedione-d6) is added and the vial is capped and mixed thoroughly to combine. An aliquot is then analyzed quantitatively against a linear calibration curve using a GC/MS equipped with a mass selective detector. In this analysis, the limit of detection is 0.34 ug/mL for 'Diacetyl' and 0.41 ug/mL for '2,3-Pentanedione'.

Company	Baker White Inc.	# Samples	1
Analyst	01	Sample(s) Received	07/23/2014
Parameters	GC / MS Analysis	Client Project:	T1
Job #	0714-177		

Enthalpy Code	Sample Name	Client's Sample ID	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0714-177-39	105-0mg	-	Not Detected	Not Detected

**QC Notes:**

'Diacetyl' and '2,3-Pentanedione' were not detected above the minimum detection limit.

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# Baker White Inc.

6111 Hwy 10 NW Suite 300  
Ramsey, MN 55303

## Carbonyl Assay Samples Received 07/23/2014

Product Name  
*107 - 0mg*

## Analysis Report (0714-177)

GC / MS Analysis For  
Diacetyl  
2,3-Pentanedione (aka: Acetyl propionyl)



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Company:	Baker White Inc.
Sample Condition:	Samples received in good condition.
Notes: <i>Chain of custody verified.</i>	

Method / Parameter	Analyte(s)
GC / MS Analysis	Diacetyl
	2,3-Pentanedione <i>(aka: Acetyl propionyl)</i>

**Summary of Method:**

A measured volume of sample is combined with a volume of acetonitrile. A known amount of internal standard (Butanedione-d6) is added and the vial is capped and mixed thoroughly to combine. An aliquot is then analyzed quantitatively against a linear calibration curve using a GC/MS equipped with a mass selective detector. In this analysis, the limit of detection is 0.34 ug/mL for 'Diacetyl' and 0.41 ug/mL for '2,3-Pentanedione'.

Company	Baker White Inc.	# Samples	1
Analyst	01		Sample(s) Received
Parameters	GC / MS Analysis		07/23/2014
Job #	0714-177		Client Project: T1

Enthalpy Code	Sample Name	Client's Sample ID	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0714-177-40	107-0mg	-	Not Detected	Not Detected

**QC Notes:**

'Diacetyl' and '2,3-Pentanedione' were not detected above the minimum detection limit.

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# Baker White Inc.

6111 Hwy 10 NW Suite 300  
Ramsey, MN 55303

## Carbonyl Assay Samples Received 07/23/2014

Product Name  
*113 - 0mg*

Analysis Report  
(0714-177)

GC / MS Analysis For  
Diacetyl  
2,3-Pentanedione (aka: Acetyl propionyl)



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Company:	Baker White Inc.
Sample Condition:	Samples received in good condition.
Notes: <i>Chain of custody verified.</i>	

Method / Parameter	Analyte(s)
GC / MS Analysis	Diacetyl
	2,3-Pentanedione <i>(aka: Acetyl propionyl)</i>

**Summary of Method:**

A measured volume of sample is combined with a volume of acetonitrile. A known amount of internal standard (Butanedione-d6) is added and the vial is capped and mixed thoroughly to combine. An aliquot is then analyzed quantitatively against a linear calibration curve using a GC/MS equipped with a mass selective detector. In this analysis, the limit of detection is 0.34 ug/mL for 'Diacetyl' and 0.41 ug/mL for '2,3-Pentanedione'.

Company	Baker White Inc.	# Samples	1
Analyst	01	Sample(s) Received	07/23/2014
Parameters	GC / MS Analysis	Client Project:	T1
Job #	0714-177		

Enthalpy Code	Sample Name	Client's Sample ID	Diacetyl (ug/mL)	2,3-Pentanedione (ug/mL)
0714-177-41	113-0mg	-	Not Detected	Not Detected

**QC Notes:**

'Diacetyl' and '2,3-Pentanedione' were not detected above the minimum detection limit.

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