

Addendum

Stored methods

- Method 1 120 degrees isothermal
- Method 2 120 degrees (5 minutes) ramped to 270 degrees at 70/min Total run time 10 minutes
- Method 3 120 degrees (1 minute) ramped to 270 degrees at 70/min Total run time 10 minutes

Always verify that the temperature for the GC interface is at least 10 degrees higher than the maximum temperature of the GC oven.

Quality Assurance Program Gas Chromatograph/Fourier Transfer Infrared (GC/FTIR) Spectrometer Verification

Purpose

To verify that the instrument is suitable for use in the analysis of drug samples (in particular amphetamine, phentermine, methamphetamine and related compounds) and that all analysts are trained in the use of the instrument.

Procedure

The instrument consists of an Agilent Technologies 6890 Gas Chromatograph coupled to a Thermo Nicolet Gas Chromatograph interface attached to a Thermo Nicolet Nexus 470 FTIR. It was installed and set up by Thermo Nicolet service engineers.

The instrument was initially run at varying conditions to determine the optimum values to obtain the best results. It was determined that the sample volume should be in the 1 to 5 microliter range (depending on the strength of the individual sample) when injected onto the column. Samples are to be run either isothermally or with a ramped program using a temperature or temperature ramp that is suitable for the sample being analyzed. These temperatures should be the same or close to the values used for Gas Chromatograph/Flame Ionization Detector GC/FID) or Gas Chromatograph/Mass Spectrometer techniques (GC/MS).

The next step was to run a variety of standards in order to obtain their respective gas phase IR spectra. These were added to a library that was created by TBI Crime Lab personnel. This initial library consisted of 64 compounds. (Additional compounds will be added to the library as necessary or as they become available). Except for compounds that break down or optical isomers (d and l ephedrine for example), the resulting spectra were determined to be capable of differentiating and identifying the compounds with no ambiguity. These spectra were compared to published standards whenever possible. In all cases the standards have been previously verified by either solid phase FTIR, GC/MS, or both.

All current forensic scientist permanently assigned to the Forensic Chemistry unit were then given a briefing on how to operate the instrument. At this point three different unknowns were assigned to each chemist to analyze using the instrument. This was done to verify that they have an understanding of how the instrument operates and can obtain the correct results.

After being reviewed by the Forensic Chemistry Section Supervisor, the TBI Quality Assurance Manager, and the Regional Crime Laboratory Supervisor the instrument was commissioned in the Forensic Chemistry Section to be used for case analysis.

References

1. Thermo Nicolet GC Interface User's Guide, Thermo Nicolet Corporation, 1999.
2. Thermo Nicolet Series User's Guide, Thermo Nicolet Corporation, 1999.
3. Thermo Nicolet 470 User's Guide, Thermo Nicolet Corporation, 1999.
4. Agilent 6890 Series Gas Chromatograph Operating Manual Volume 1-General Information, Agilent Technologies, 2000.
5. Agilent 6890 Series Gas Chromatograph Operating Manual Volume 2-Inlets, Agilent Technologies, 2000.
6. Agilent 6890 Series Gas Chromatograph Operating Manual Volume 3-Detectors, Agilent Technologies, 2000.
7. Instrumental Data for Drug Analysis Volume 6, Mills, Terry, III, et. al., CRC Press, 1996.
8. Forensic Drug Analysis by GC/FT-IR, Kempfert, Ken, Applied Spectroscopy, Volume 42, No. 5, 1988.

TENNESSEE BUREAU OF INVESTIGATION FORENSIC SERVICES DIVISION

Method Validation Review Form

Procedure Gas Chromatograph Fourier Transform Spectrometer

Check the appropriate

New Test X

Update of Test _____

This form is to be used as a coversheet for any new method, change in method, reagent or kit change. The Forensic Scientist appointed for procedure development/validation is to initial and date the appropriate box and attach documentation of required validation study results.

Submit all information to the Quality Assurance Manager prior to implementation of the procedure.

	REVIEWED	DATE COMPLETED
Package Insert (if applicable)	N/A	
Linearity, Sensitivity, Specificity (if applicable)	WHS	8/28/01
Parallel Testing	WHS	8/30/01
Quality Control Ranges Established	WHS	8/30/01
Technical Staff Training Complete	WHS	8/30/01
LIMS Messages(s) Established	N/A	
Sample of Final Report	N/A	
Completed Laboratory Procedure	WHS	8/30/01
Unit Supervisor Review	DB	8/30/01

Sign and date to indicate your acceptance of the procedure:

Unit Supervisor (if applicable)

Phillip W. Frang 8/30/01

Technical Leader (if applicable)

W. L. S. C. 8/30/01

Regional Laboratory Supervisor

Lenny Wilder 9-4-01

Quality Assurance Manager

Sharon H. Hester-Jackson, PhD

Forensic Drug Analysis by GC/FT-IR

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Gas chromatography Fourier transform infrared spectroscopy (GC/FT-IR) has been examined as a new forensic drug identification technique. The method is found to be specific for many closely related isomers including cocaine and pseudococaine or phentermine and methamphetamine. Distinguishing some isomers may require spectral subtraction or examination of band positions. The useful range of GC/FT-IR sensitivities was determined to be from 50 to 500 nanograms per component.

Index Headings: Analysis for drugs; Infrared; Gas chromatography.

INTRODUCTION

The analysis of forensic drug samples consisting of unknown white powders, tablets, or capsules, as well as drug residues on a multiple of paraphernalia, has been accomplished by a variety of techniques. Chemical color tests, crystal tests, gas chromatography, UV, and IR are a few of the methods available.¹ Often these samples are mixtures of drugs which are not separable by extraction. The most efficient method for identification is a combined chromatographic and spectroscopic technique.

Numerous papers have been published that describe the use of gas chromatography/mass spectrometry (GC/MS) as a rapid method of simultaneous separation and identification of these mixtures.^{2,3,4} However, infrared spectroscopy may be necessary, in addition to the GC/MS technique, for distinguishing the isomers of the increasing number of drugs, both illicit and commercially available.

Gas chromatography/Fourier transform infrared spectroscopy (GC/FT-IR) has been reported to be an excellent method for the separation and identification of complex mixtures such as solvents, petrochemicals, and flavors and fragrances.^{5,6,7} We will examine GC/FT-IR as a method of analysis for drugs of forensic interest from three points of assessment:

1. feasibility
2. specificity
3. sensitivity

EXPERIMENTAL

A Hewlett-Packard 5890 gas chromatograph using cool on-column injection was interfaced to a Nicolet 20SXC FT-IR with a dedicated MCT-A detector. Capillary columns used for the study were:

1. 0.32 mm i.d. $\times$ 10 m $\times$ 1.0 μ m DB-1 for the feasibility study.
2. 0.25 mm i.d. $\times$ 15 m $\times$ 0.25 μ m DB-5 for the sensitivity study and running of standards.
3. 0.32 mm $\times$ 5 m $\times$ 0.25 μ m DB-1 for the LSD analysis.

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A 15 $\text{cm}^{-1} \times$ 1.0 mm i.d. gold-coated light pipe was used to measure IR data from the GC. The capillary column is threaded through glass-lined stainless steel heated transfer lines and positioned at the exact entrance to the light pipe, the result being a totally inert system. This configuration, combined with the use of cool on-column injections, makes the analysis of labile compounds possible. The spectrometer was operated at 8- cm^{-1} data collect, and 7 scans per second were co-added to disk at 0.93-s intervals as fully processed transmittance spectra.

The calculation of IR response vs. time was done with the use of the standard software package utilizing a Gram-Schmidt reconstruction (GSR). This reconstruct produces a result similar to a GC detector response or a total ion chromatogram from a GC/MS system.

Controlled substance standards were obtained from Sigma Chemical (St. Louis, MO) and Alltech Assoc. (Deerfield, IL) and were extracted as free acid or free base standards into CH_2Cl_2 solvent. Twenty different standards were run by GC/FT-IR, and the spectra were added to the standard Nicolet-Aldrich vapor-phase library consisting of 5010 components.

Approximately 1- μ g amounts of these standards were injected in order to produce spectra with high signal-to-noise levels.

RESULTS AND DISCUSSION

Figure 1 shows the Gram-Schmidt reconstruct (GSR) for a mixture of "street drugs," where 7 components ranging from methamphetamine through cocaine were separated and identified. This is a mixture of standards, at concentrations from 100 to 500 ng each, which demonstrates the feasibility of the method. Good chromatographic separation of all the components was achieved. Processing and searching the data produced correct peak identifications for all the components. A library search of peak #5 is shown in Fig. 2 and clearly identifies benzphetamine as the best match.

The specificity of GC/FT-IR can be assessed by comparing the vapor-phase spectra of several closely related drug compounds. Figure 3 shows IR spectra for amphetamine-like compounds. The value of the IR technique in distinguishing amongst the phenethyl amines is apparent. Major differences at 2800 cm^{-1} in the IR spectra for methamphetamine, a secondary amine, and phentermine, a primary amine, should be noted. The unique difference is due to the secondary amine present in methamphetamine but not in phentermine. Phentermine and methamphetamine give rise to virtually identical electron impact (EI) mass spectra with a base peak at 58 (Ref. 8) due to the fragment $\text{C}_7\text{H}_9\text{N}$, rendering mass

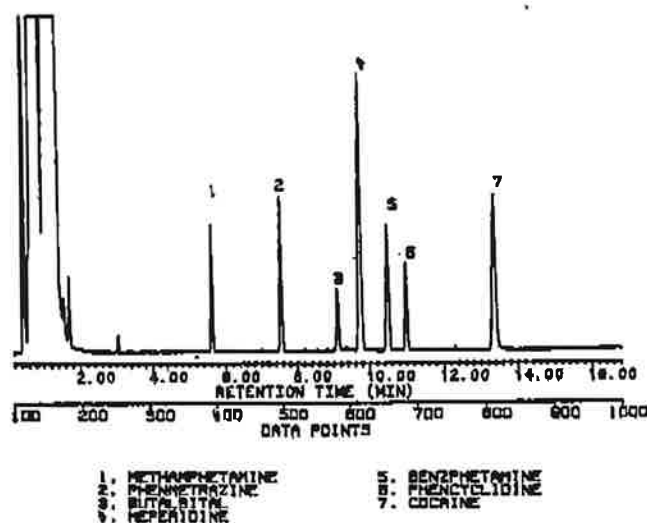


FIG. 1. Gram-Schmidt reconstruct of "street drugs," 0.32 mm $\times$ 10 m $\times$ 1.0 μ m DB-138 - 200 - 270°C (at 25, 10 deg/min. (1) Methamphetamine; (2) phenmetrazine; (3) butalbital; (4) meperidine; (5) benzphetamine; (6) phencyclidine; (7) cocaine.

spectroscopy nonspecific in being able to distinguish these two chemically distinct compounds.

Representative vapor-phase spectra of local anesthetics shown in Fig. 4 are clearly unique. A more chal-

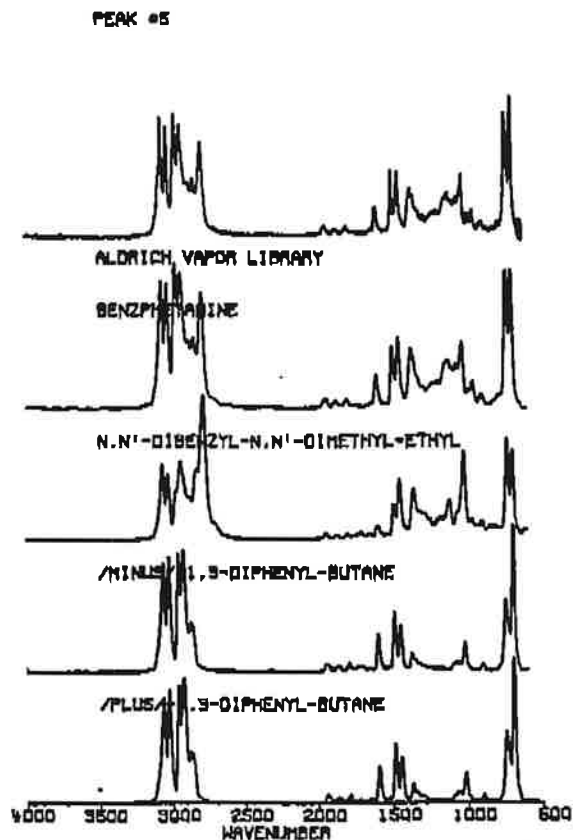


FIG. 2. Library search result for peak #5 in "street drugs" sample. Shown from top to bottom: peak #5, best library result; benzphetamine, 2nd best; *N,N'* dibenzyl-*N,N'*-dimethyl-ethylenediamine, 3rd best; (-) 1,3-diphenyl-butane, 4th best; (+) 1,3-diphenyl-butane.

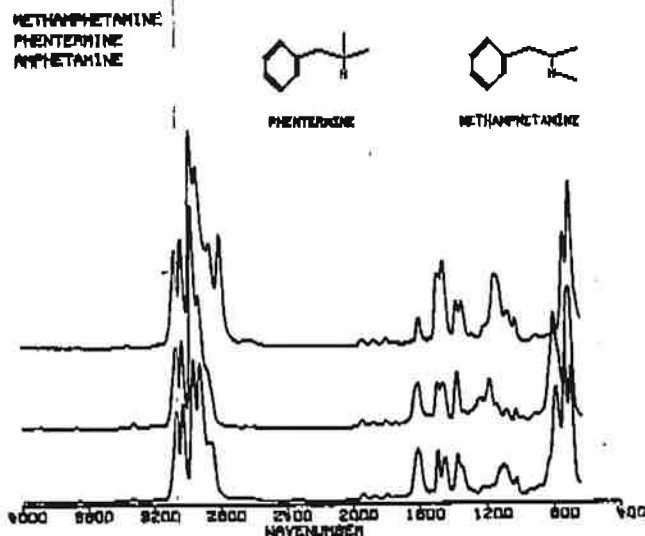


FIG. 3. Vapor-phase spectra for three phenethyl amine drugs. From top to bottom: methamphetamine, phentermine, and amphetamine. Band at 2800 cm^{-1} in methamphetamine indicates a secondary amine.

lenging comparison in this class of compounds is shown in Fig. 5 for the diastereomers cocaine and pseudococaine. Here the orientation of the tropane substituents dramatically affects the IR spectrum. Considerable difference in the fingerprint region and also the carbonyl band of pseudococaine at 1743 cm^{-1} is visible as two bands at 1766 cm^{-1} and 1735 cm^{-1} in cocaine.

We report the first analysis of lysergic acid diethyl amide (LSD) by GC/FT-IR. Figure 6 shows the GSR of an LSD standard injecting 1.2 μ L on-column at 1.0 μ g/ μ L in CH_2Cl_2 . This analysis represents a stringent test of the inertness of the system since LSD is very sensitive to any glass or metal surfaces, and, for this reason, the column must be fed directly into the light pipe and the injection must be done on-column to prevent any exposure to glass.

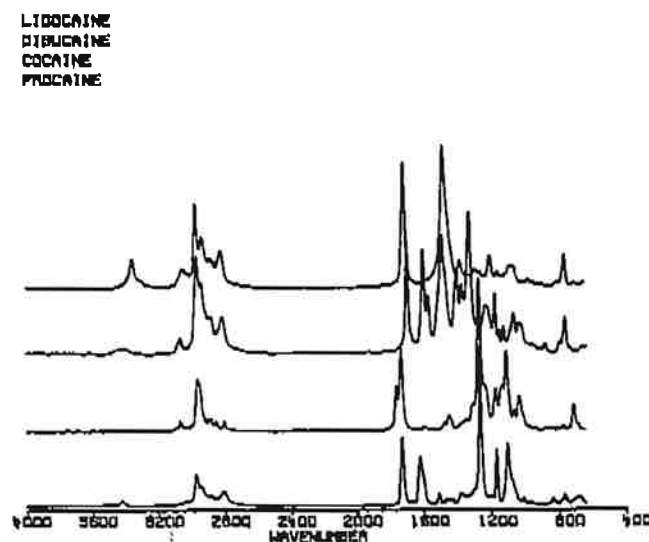


FIG. 4. Vapor-phase spectra for four local anesthetics. From top to bottom: lidocaine, dibucaine, cocaine, and procaine, all showing easily distinguishable spectra.

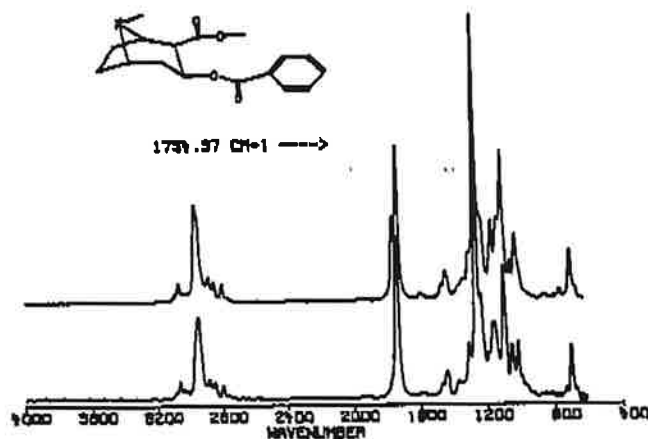
COCAINE
D-PSEUDOCOCAINE

FIG. 5. Vapor-phase spectra for diastereomers of cocaine. From top to bottom: cocaine and pseudococaine. Cocaine is [IR-(2-exo, 3-exo)] substituted with carbonyl bands at 1768 and 1735 cm^{-1} and pseudo-cocaine is [IR-(2-endo, 3-exo)] substituted with a singlet carbonyl at 1743 cm^{-1} .

Figure 7 shows spectra for LSD and its analog lysergic acid methyl propyl amide (LAMPA). Again, GC/FT-IR has clearly distinguished these closely related compounds, showing considerable differences in the IR spectra. EI mass spectra of these two compounds are virtually identical (Ref. 8).

Representative barbiturate vapor-phase spectra are shown in Fig. 8. Of those shown, all are easily distinguishable, with the exception of pentobarbital and butobarbital. This result is not unexpected, since IR spectra generally do not exhibit major differences as aliphatic chains are lengthened. Figure 9 shows these two barbiturate spectra overlapped, and they are quite similar. We can predict a higher C-H stretching frequency relative to the C=O stretching frequency intensity in pentobarbital due to its extra CH_2 moiety.

An interactive spectral subtraction of pentobarbital and butobarbital and attempts to zero the C=O band

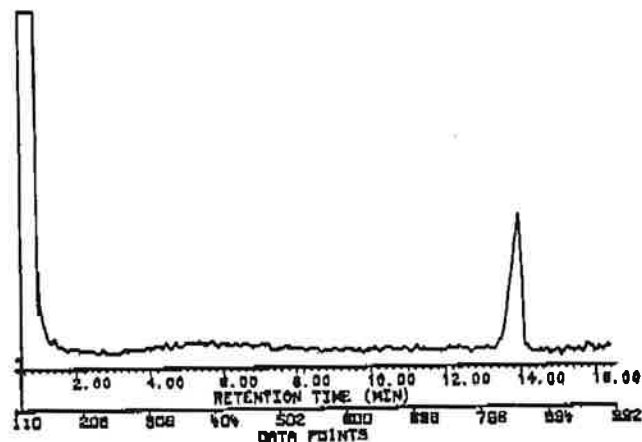


FIG. 6. Gram-Schmidt reconstruct of LSD standard. 0.32 mm $\times$ 5 m $\times$ 0.25 μm DB-1 38 - 200 - 275°C at 25, 10 deg/min. LSD elutes at 14 min into run.

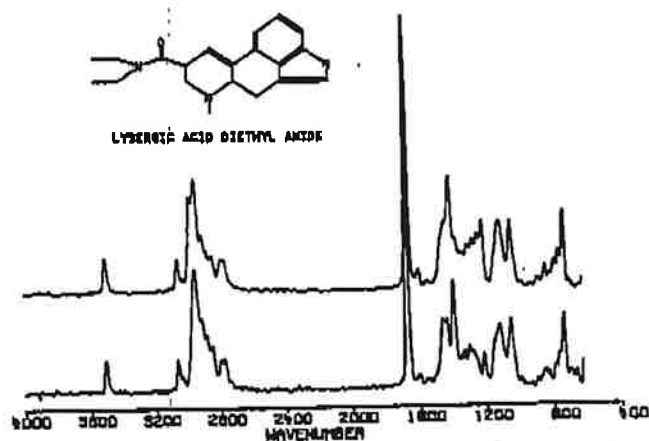
LYSERGIC ACID DIETHYL AMIDE
LYSERGIC ACID METHYL PROPYL AMIDE

FIG. 7. Vapor-phase spectra of LSD and LAMPA. From top to bottom: lysergic acid diethyl amide (LAMPA), differentiable in the fingerprint spectral region.

yield the result shown in Fig. 10. As predicted, the greater intensity of the C-H stretching response in the pentobarbital spectrum remains as a positive feature. Additionally, a band unique to pentobarbital at 913 cm^{-1} is more readily apparent in the subtraction. Overall, the subtraction result shows differences in the following manner:

1. Bandwidth differences appear as second-derivative-like peaks in the subtraction.
2. Band position differences appear as first-derivative-like peaks.
3. Relative band intensity differences appear as "normal bands," either positive or negative.

Of course, this is a complex spectrum and these three types of differences are also blended in the subtraction.

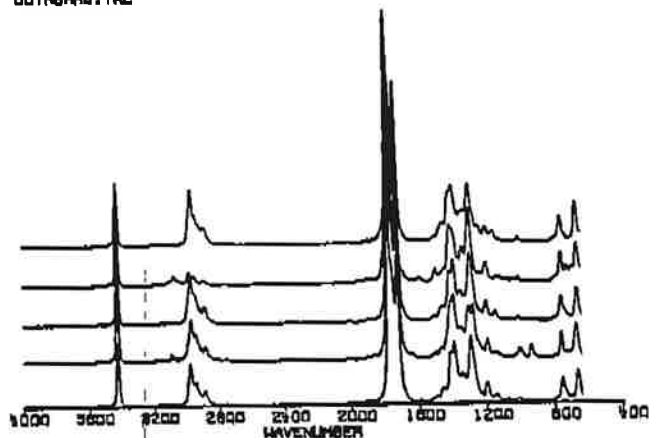
AMOBARBITAL
PHENOBARBITAL
PENTOBARBITAL
SECOBARBITAL
BUTABARBITAL

FIG. 8. Vapor-phase spectra of barbiturates. From top to bottom: amobarbital, phenobarbital, pentobarbital, secobarbital, and butobarbital. Pentobarbital and butobarbital are the two most similar.

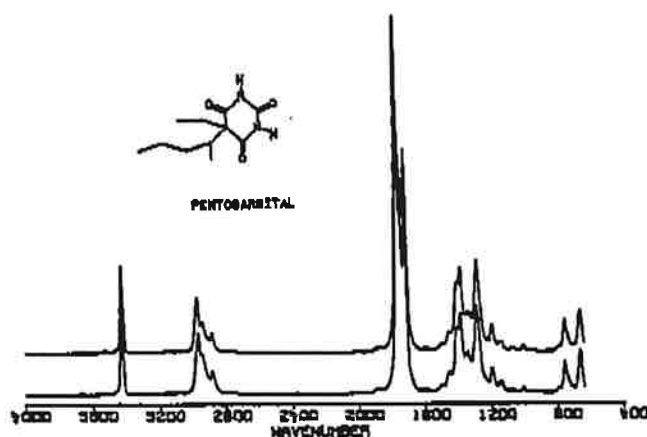
BUTABARBITAL
PENTOBARBITAL

FIG. 9. Vapor-phase spectra of butabarbital (top) and pentobarbital (bottom). Pentobarbital should show greater C-H stretching/C=O stretching ratio than butabarbital.

The band position differences are exemplified in Fig. 11, where the major CH stretching band at 2973 cm^{-1} in pentobarbital is shifted to 2979 cm^{-1} in butabarbital.

We initiated examination of the sensitivity of GC/FT-IR for the drugs by generating a response (au) vs. nanograms (ng) injected curve for lidocaine (Fig. 12) where the response in absorbance units full scale (AUFs) was calculated from the processed spectrum from each of the injected amounts. Lidocaine provides a reasonably linear response of nanograms injected vs. AUFs. Some fall off (loss of linearity is expected) in response as the amount injected is increased. This is due to chromatographic column overloading.

Assuming that all drugs would show a linear relationship of response vs. amount injected, relative GC/FT-IR sensitivities (Table I) for representatives of several classes of drugs can be calculated. The inclusion of isobutyl-methacrylate (IBMA) is done for reference purposes since this compound is used as a standard GC/FT-IR sensitivity test by many GC/FT-IR manufacturers.

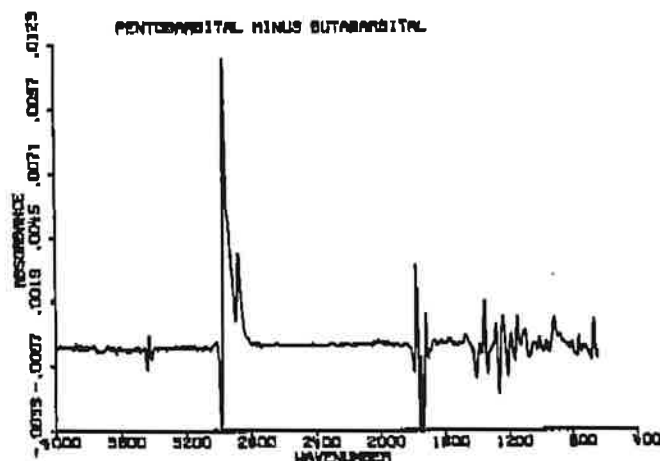


FIG. 10. Subtraction result of pentobarbital minus butabarbital shows greater C-H stretching and a band at 918 cm^{-1} in pentobarbital.

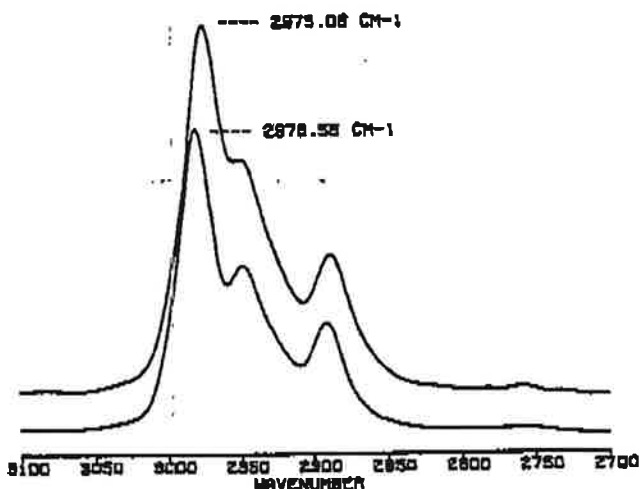
PENTOBARBITAL
BUTABARBITAL

FIG. 11. Overlay of C-H stretching regions for pentobarbital (upper) and butabarbital (lower). The major C-H stretching band is unique for each. Pentobarbital is 2973 cm^{-1} and butabarbital is 2979 cm^{-1} .

This normalized scale shows a rather broad range of relative responses for the drugs, with pentobarbital being the most strongly IR absorbing and LSD being the least. The strong IR response of pentobarbital is not unexpected since it contains three carbonyl groups. The IR response of amphetamine is predicted to be relatively weak due to the lack of a significant dipole and the aromatic structure which has a low extinction coefficient. The weak IR responses for codeine and LSD are a combination of the effects discussed above.

Deciding how many nanograms of each of these compounds are necessary for an identification is left to the forensic scientist. Identification certainly depends upon the results of supporting tests. Basing the identification entirely upon the vapor-phase IR spectrum will require data with a high signal-to-noise level. As a reference, Fig.

GC/FT-IR Response vs. Concentration for Lidocaine

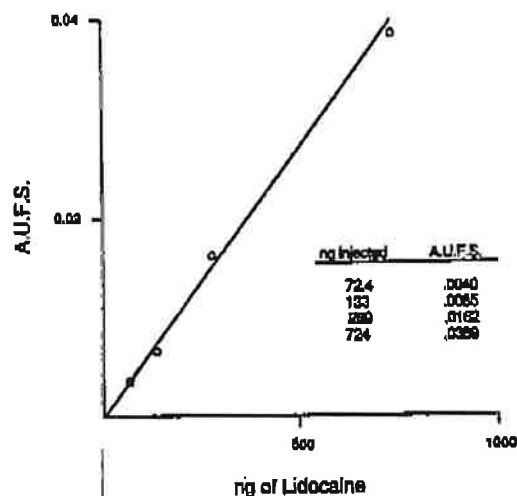


FIG. 12. GC/FT-IR response vs. nanograms injected for lidocaine.

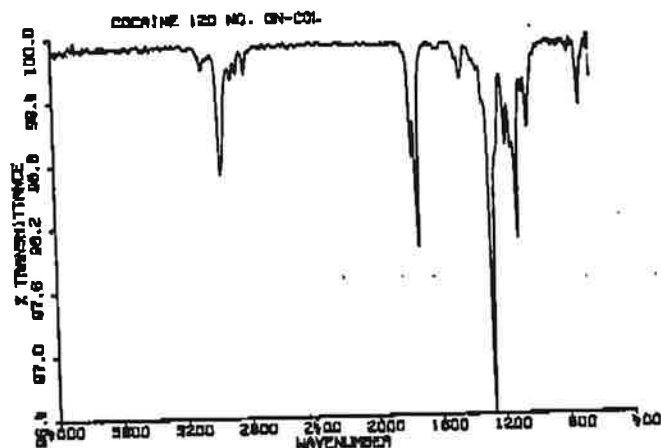


FIG. 13. GC/FT-IR spectrum of 120 ng of cocaine. The spectrum must exhibit good S/N to render identification.

13 shows the GC/FT-IR spectrum for 120 ng of cocaine with a signal-to-noise ratio of 121:1, the signal being the Y scale expanded value of 3.6% T; the noise is calculated from the Y scale expanded value at 2000 cm^{-1} of 0.0297% T peak-to-peak. These are considered to be excellent data in all respects and represent irrefutable evidence.

CONCLUSIONS

The use of hyphenated GC separation and FT-IR identification has been demonstrated for a variety of drugs. Our work shows that vapor-phase spectra of these samples are unique and that this technique allows the differentiation of closely related classes of drugs, including geometric isomers. The use of the computerized library searching capabilities of the system assists in the rapid screening of unknown materials and verifies the identification of suspected drug items. The sensitivity of the method varies for each class of drug and will require between 50 and 100 ng for high signal-to-noise spectra. These amounts are generally minimal, since dosage levels

TABLE I. Relative GC/FT-IR sensitivities.*

Compound	Nanograms injected	AUFS	Normalized to lidocaine
Amphetamine	196	.0127	1.2
Cocaine	120	.0156	2.35
Codeine	512	.0093	.33
Isobutylmethacrylate	10	.0040	7.2
Lidocaine	72	.0040	1.0
Lysergic acid diethyl amide	1200	.0061	.11
Pentobarbital	220	.0687	5.7

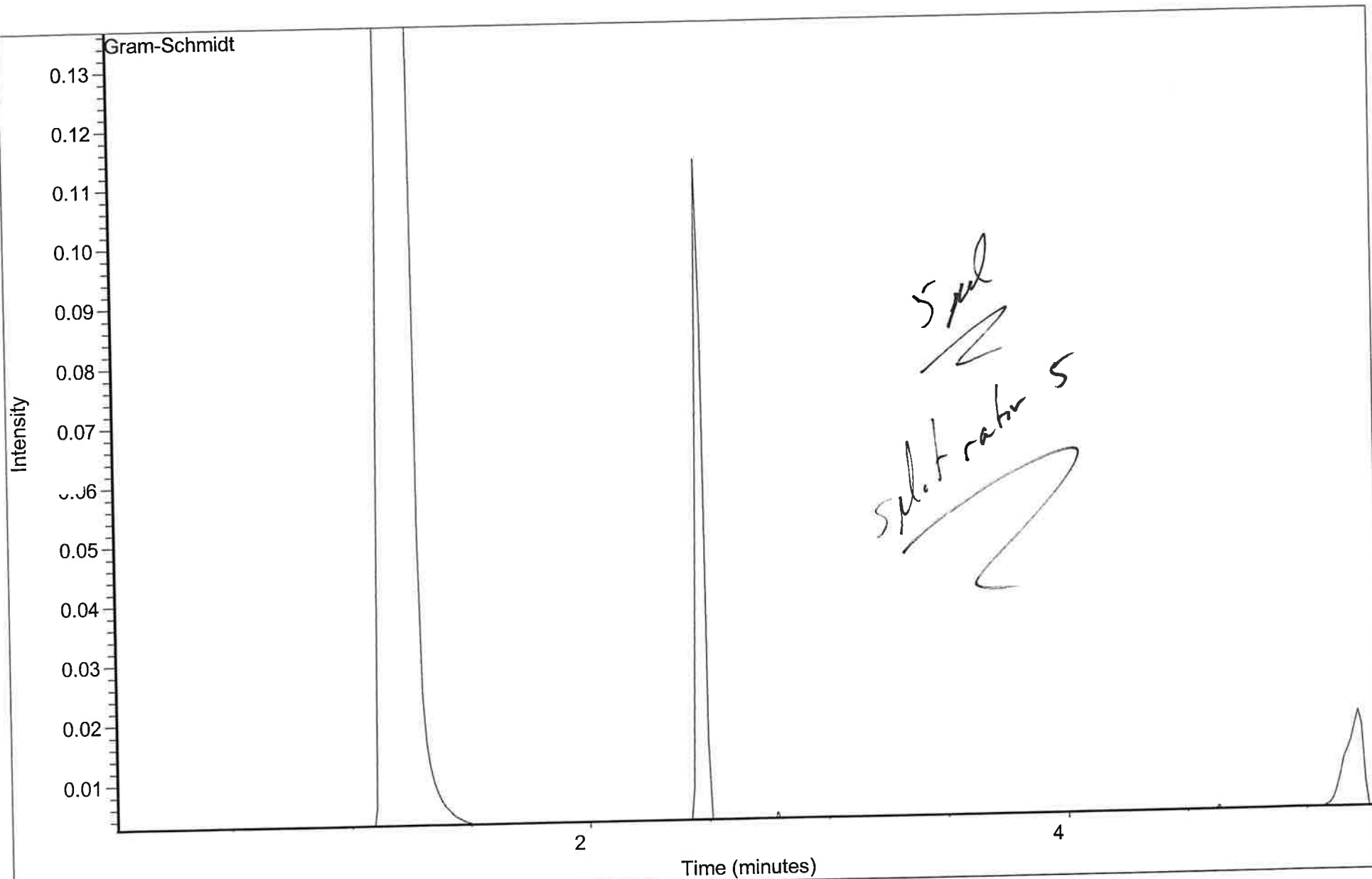
* All drugs were injected on-column, with the use of columns and conditions appropriate for that material. With GC/FT-IR, penobarbital is the most, and LSD the least, sensitive.

of drugs typically specify amounts of components in the high microgram to low milligram range.

ACKNOWLEDGMENTS

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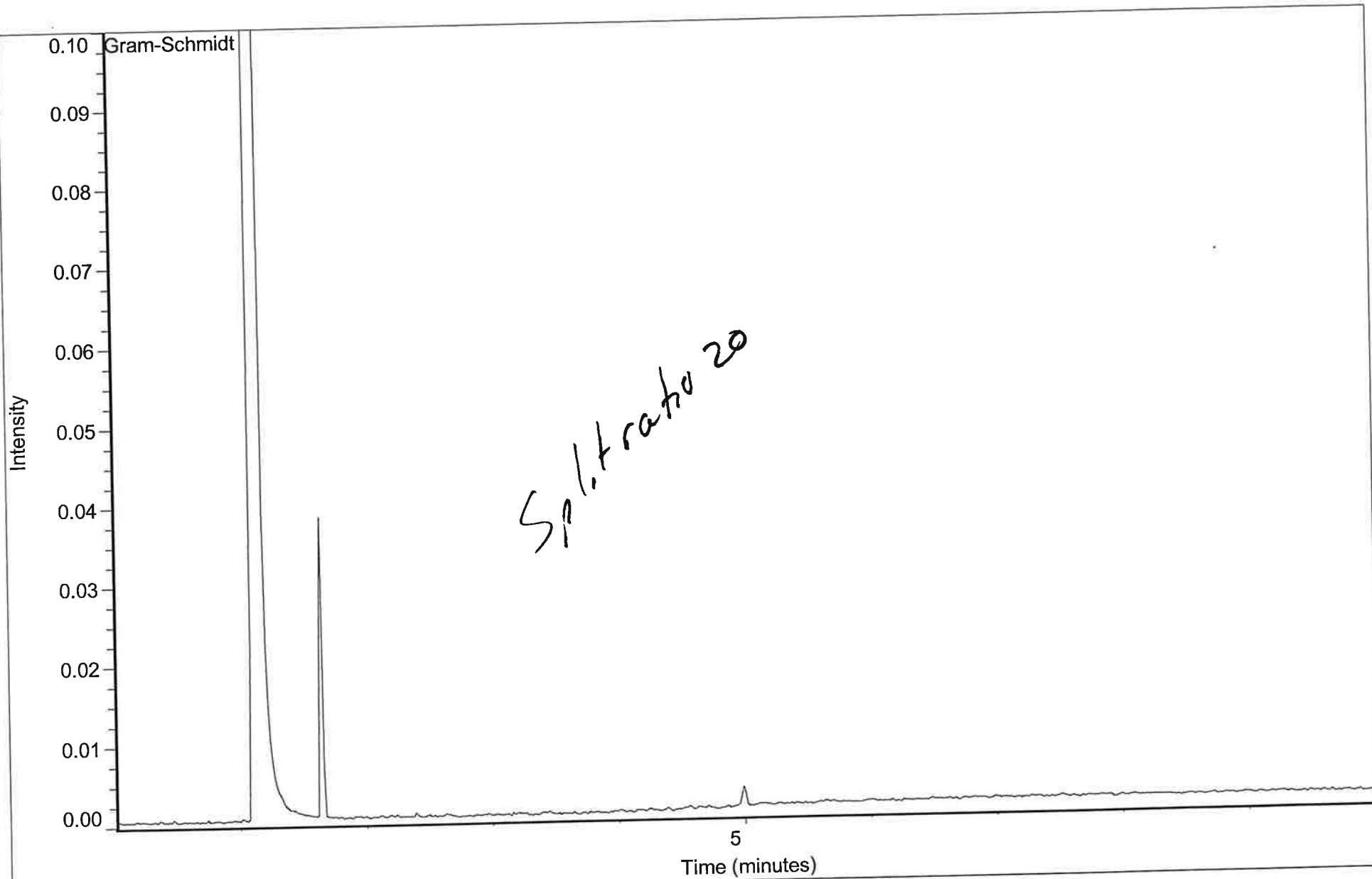


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Resolution: 8.000

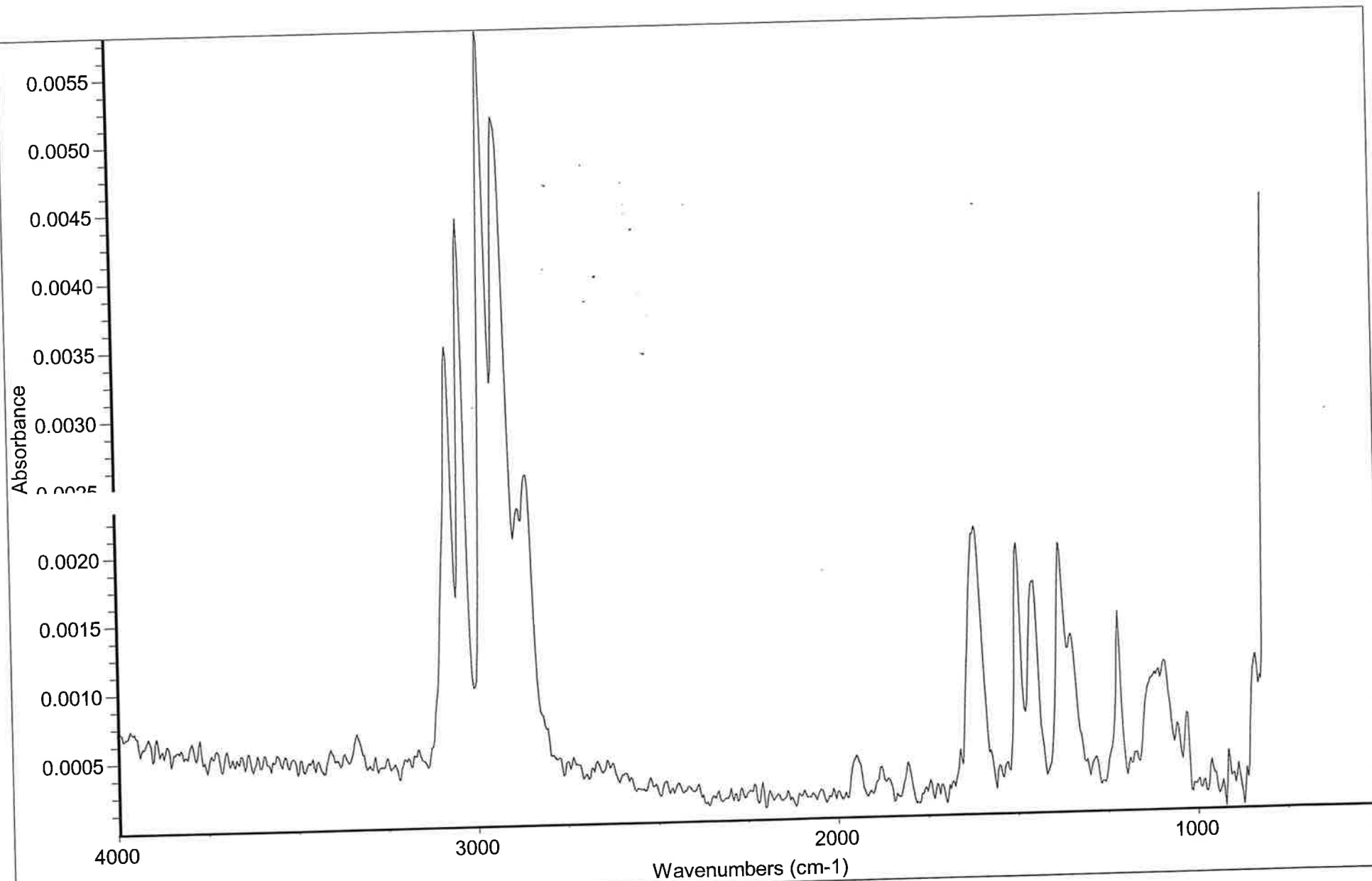


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Gram-Schmidt

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Resolution: Unknown

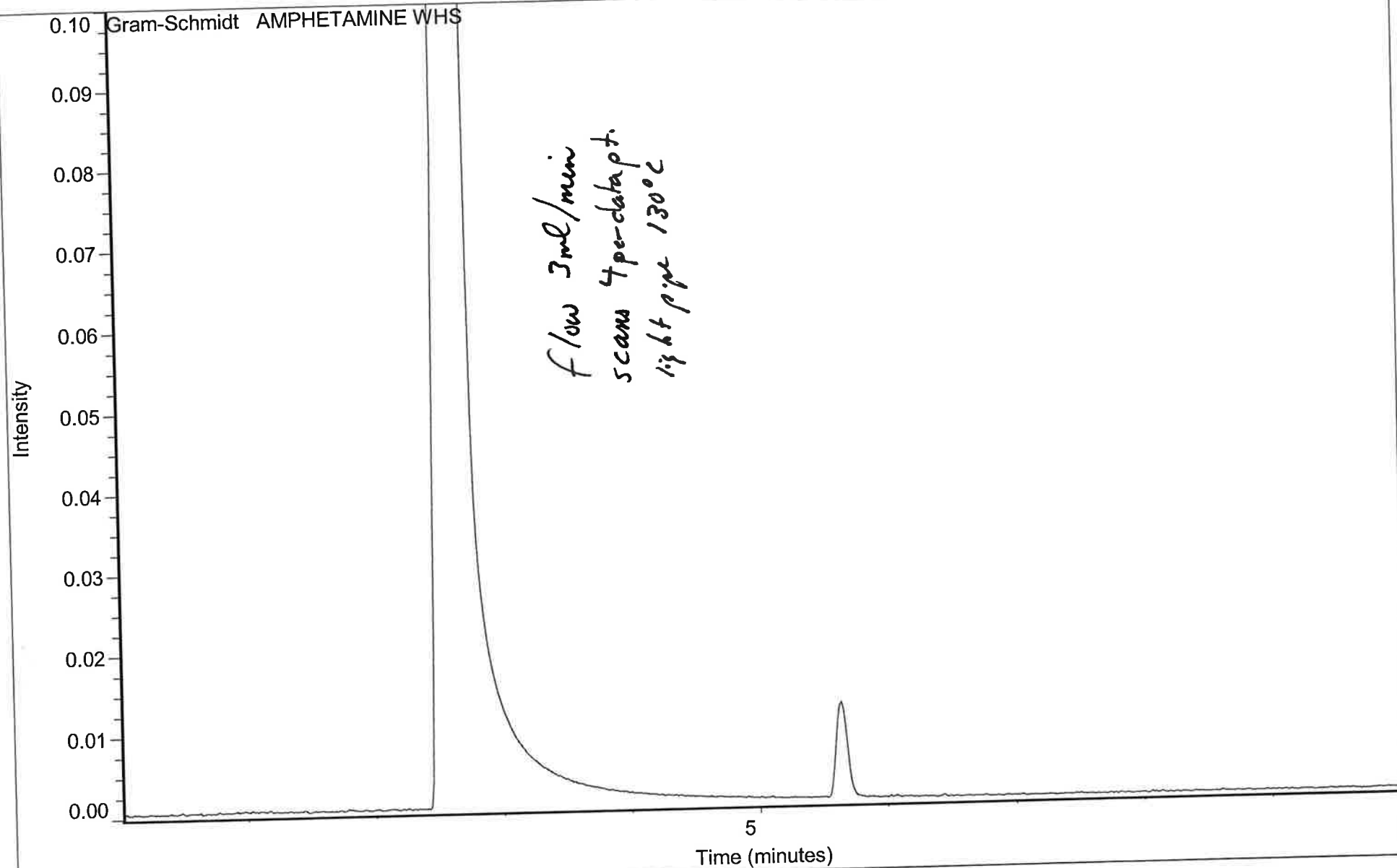


Date: Thu Jul 12 11:49:26 2001

Linked spectrum at 5.642 min. AMPHETAMINE STD WHS

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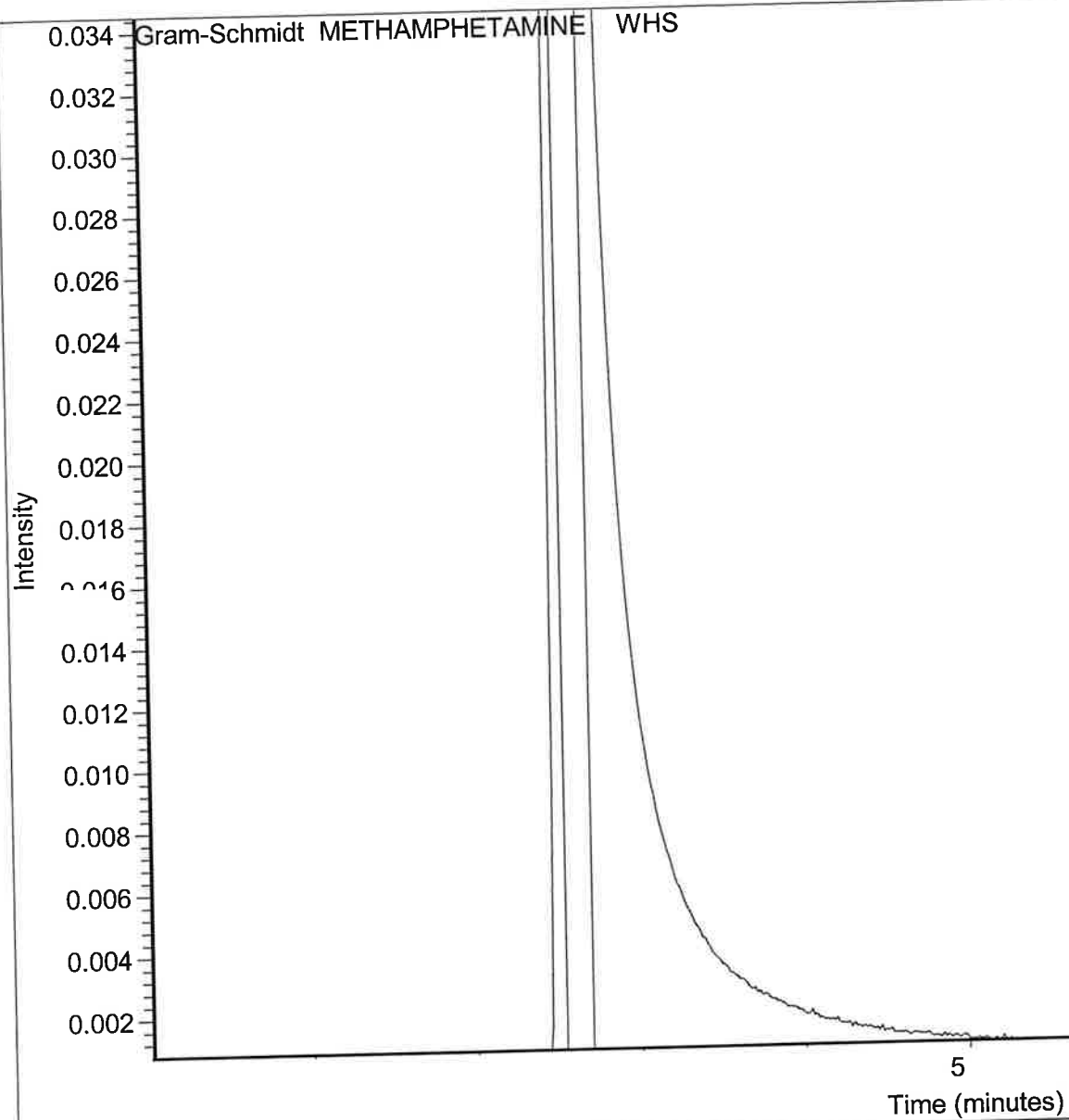


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Linked spectrum at 6.595 min.

Scans: 4

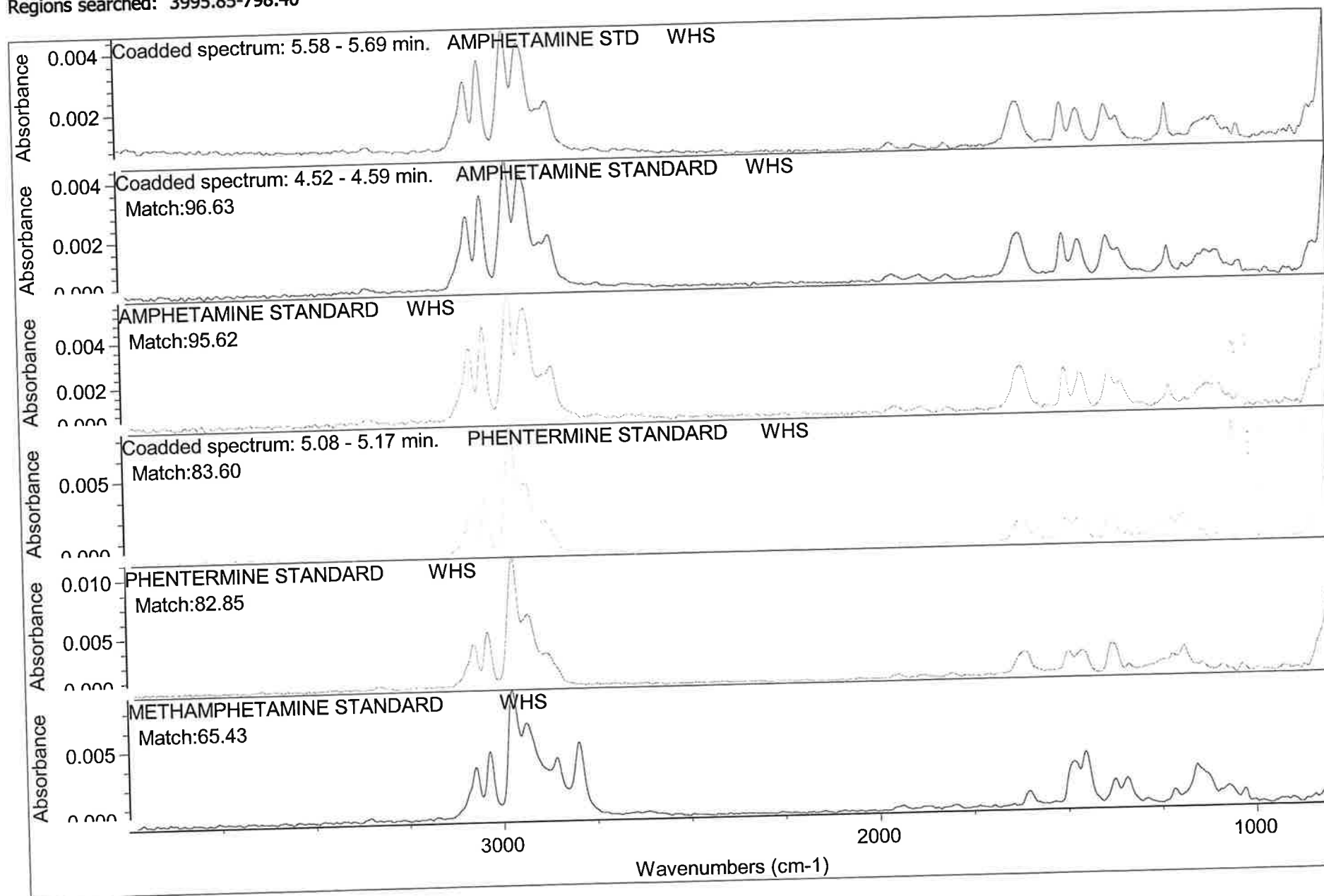
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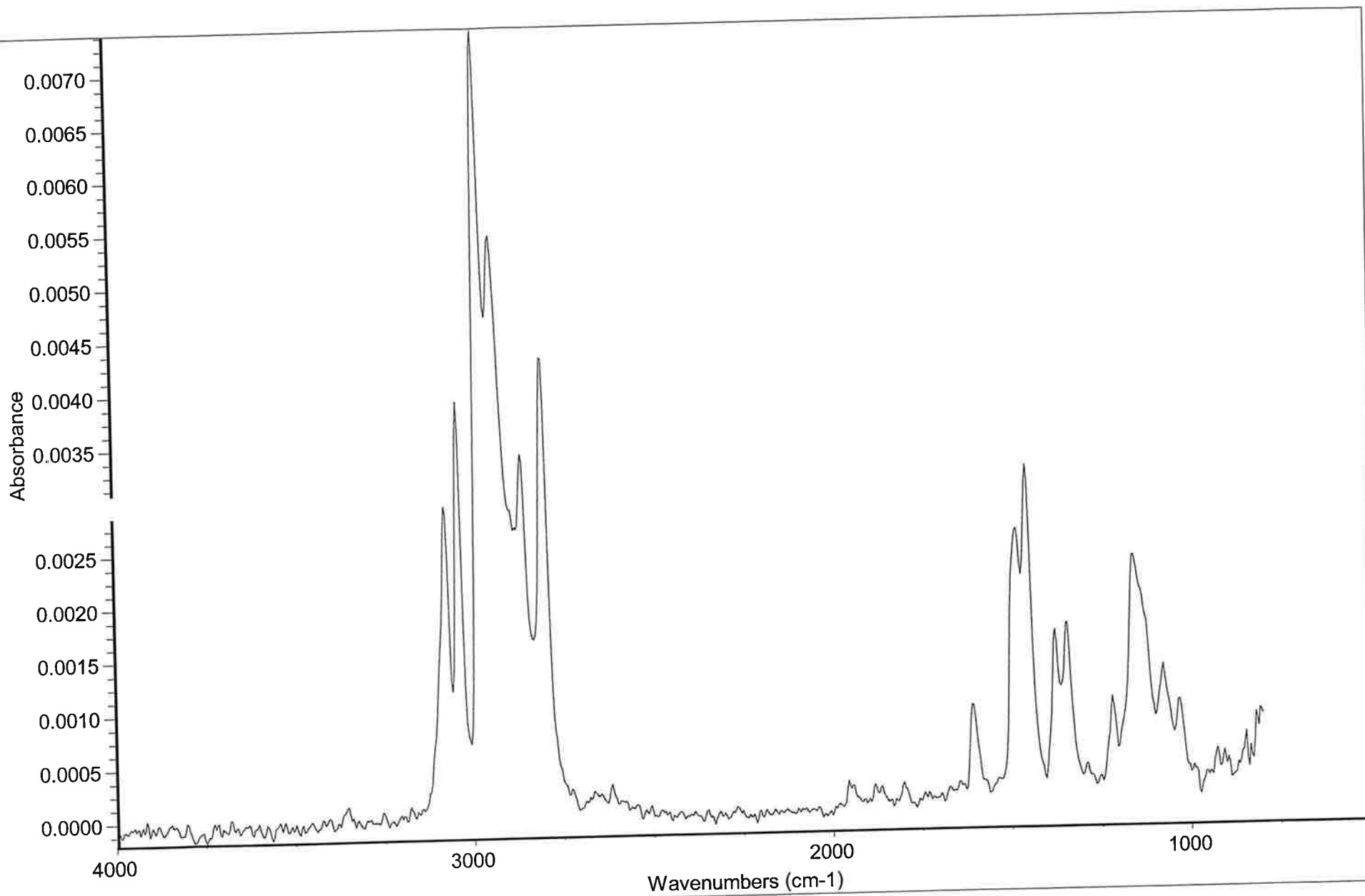
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Date: Thu Jul 12 12:41:28 2001
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Regions searched: 3995.85-798.40

Search results list of matches

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2	1	95.62	AMPHETAMINE STANDARD WHS	TEST
3	6	83.60	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	82.85	PHENTERMINE STANDARD WHS	TEST
5	3	65.43	METHAMPHETAMINE STANDARD WHS	TEST

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Regions searched: 3995.85-798.40



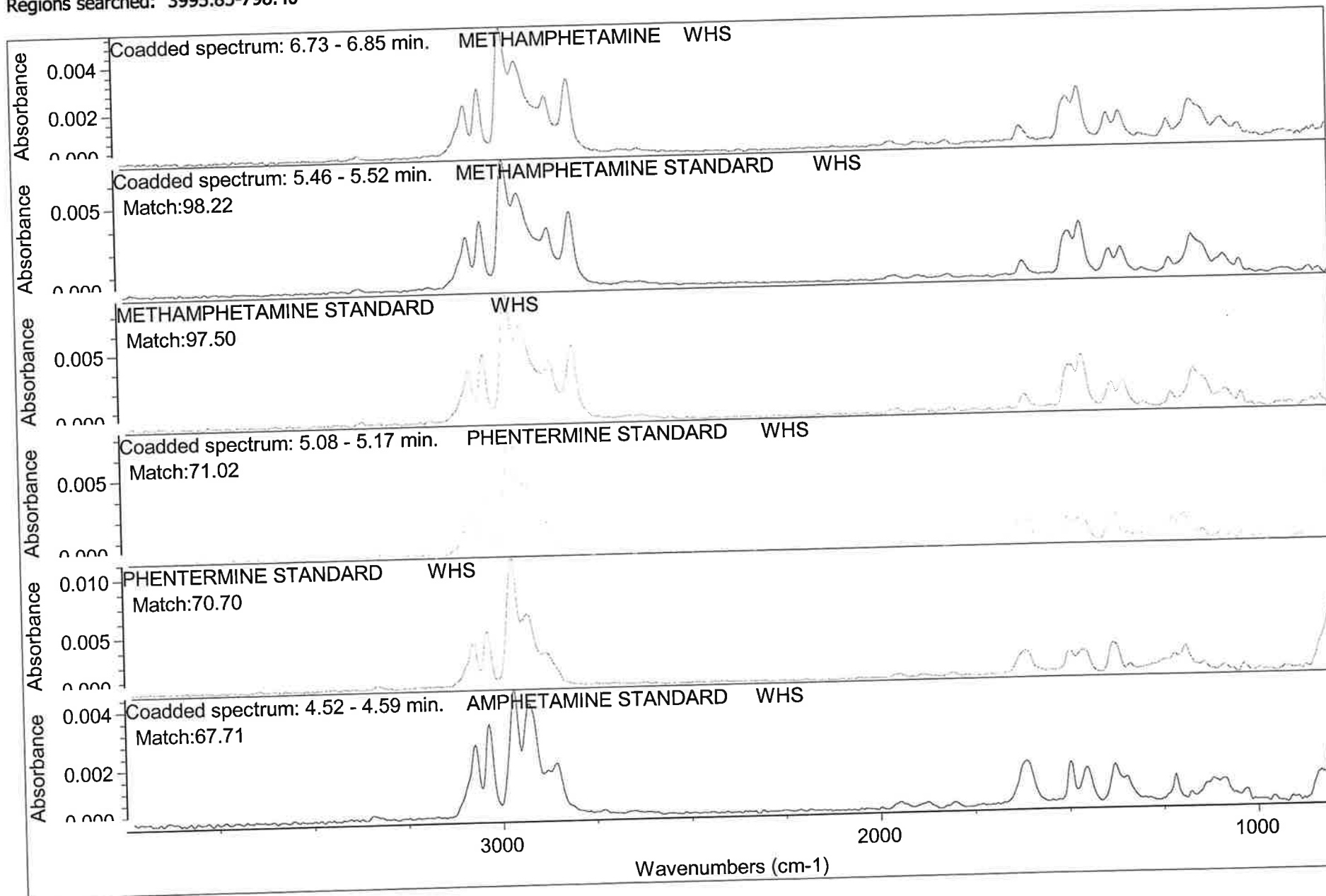


Linked spectrum at 6.792 min. METHAMPHETAMINE STD WHS

IR #1

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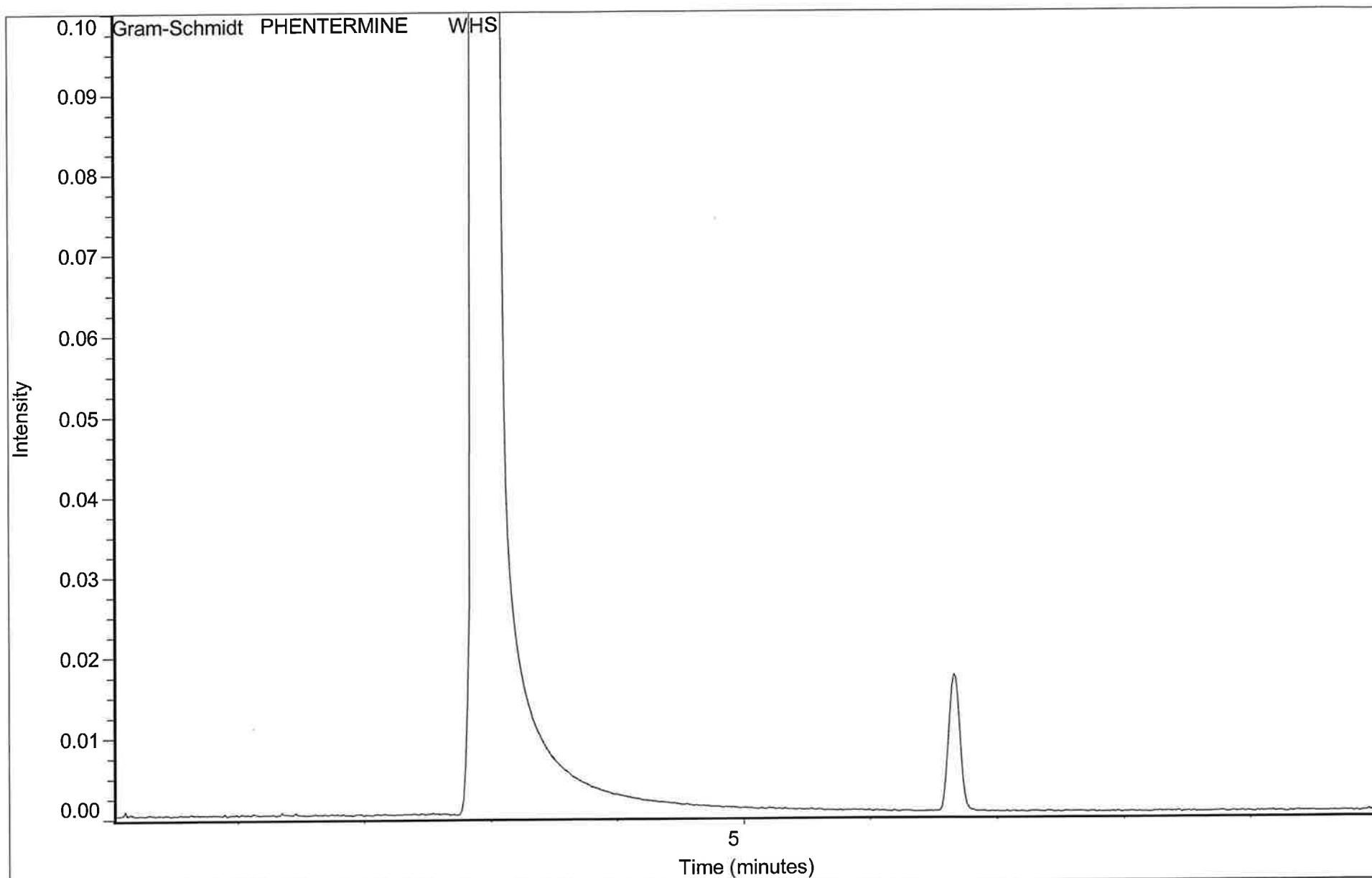
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Date: Thu Jul 12 12:45:20 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.73 - 6.85 min. METHAMPHETAMINE WHS
Date: Thu Jul 12 12:45:20 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	98.22	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	97.50	METHAMPHETAMINE STANDARD WHS	TEST
3	6	71.02	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	70.70	PHENTERMINE STANDARD WHS	TEST
5	2	67.71	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST

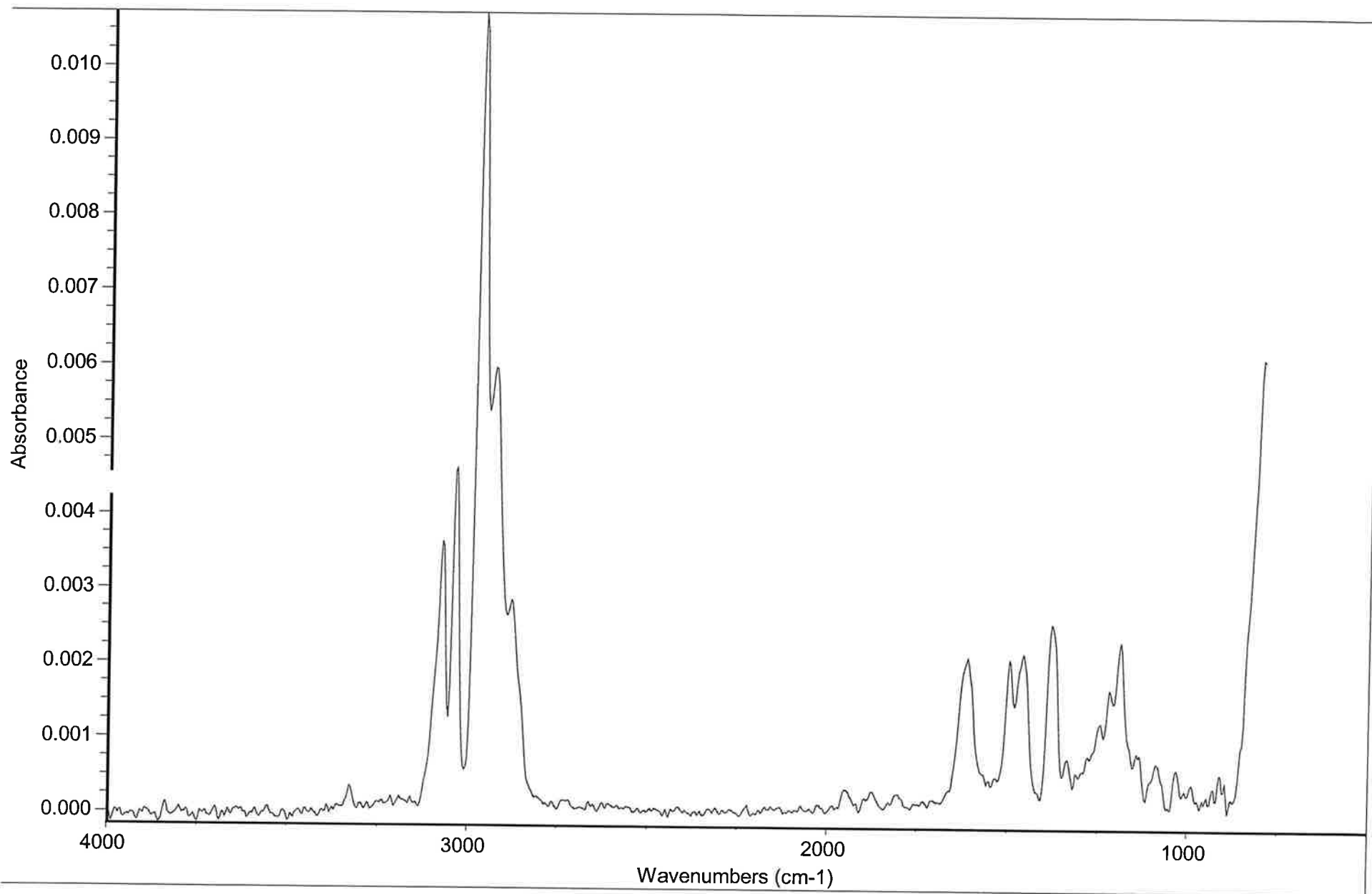


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Linked spectrum at 10.010 min.

Scans: 4

Resolution: 8.000



Linked spectrum at 6.655 min. PHENTERMINE STD WHS

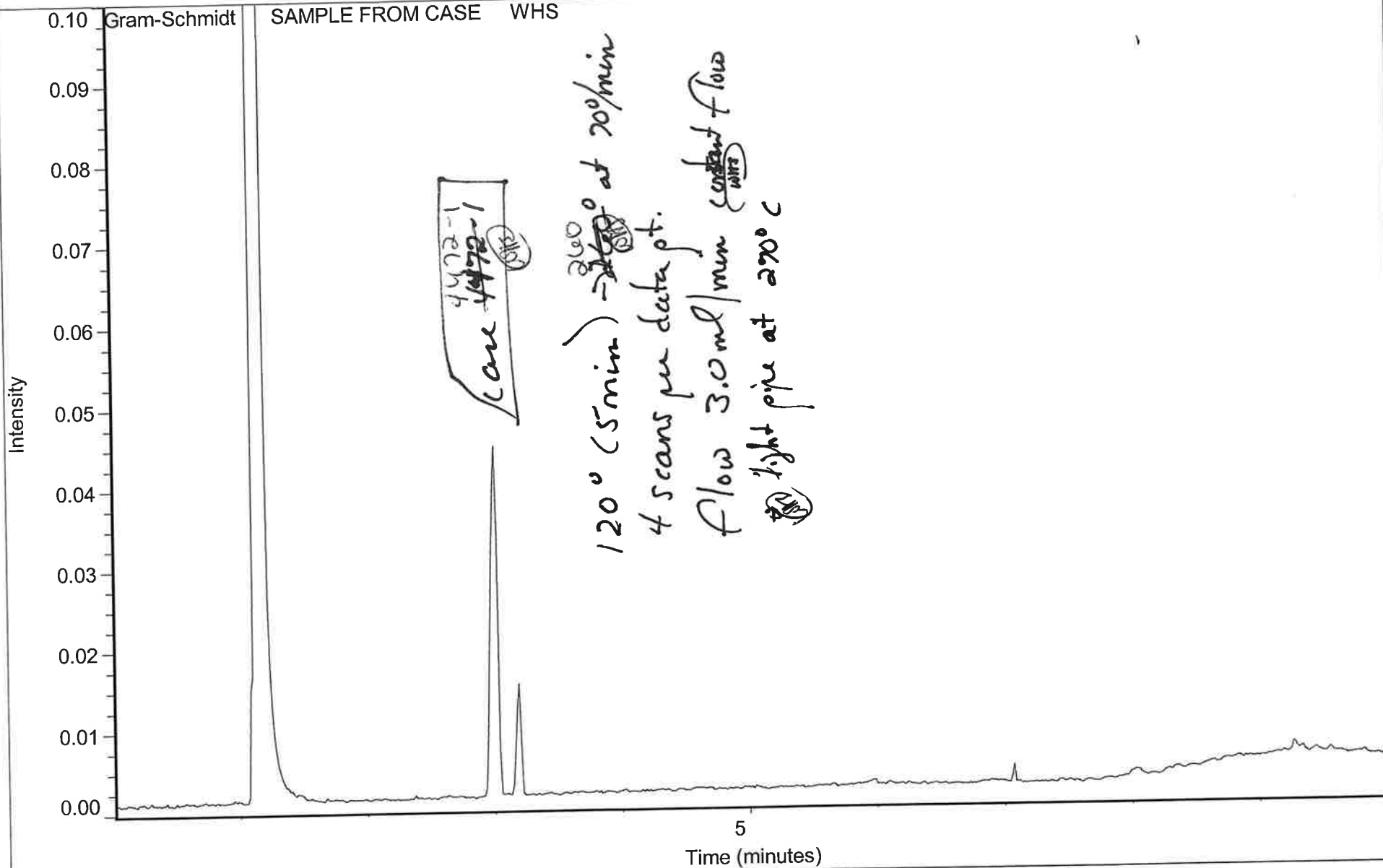
IR #1

Collection time: Thu Jul 12 12:11:46 2001

Search results for: Linked spectrum at 3.009 min. METHAMPHETAMINE SAMPLE FROM CASE WHS
Date: Thu Jul 12 16:16:32 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	92.70	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	92.55	METHAMPHETAMINE STANDARD WHS	TEST
3	5	73.27	PHENTERMINE STANDARD WHS	TEST
4	6	73.20	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
5	2	67.40	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST



Date: Unknown

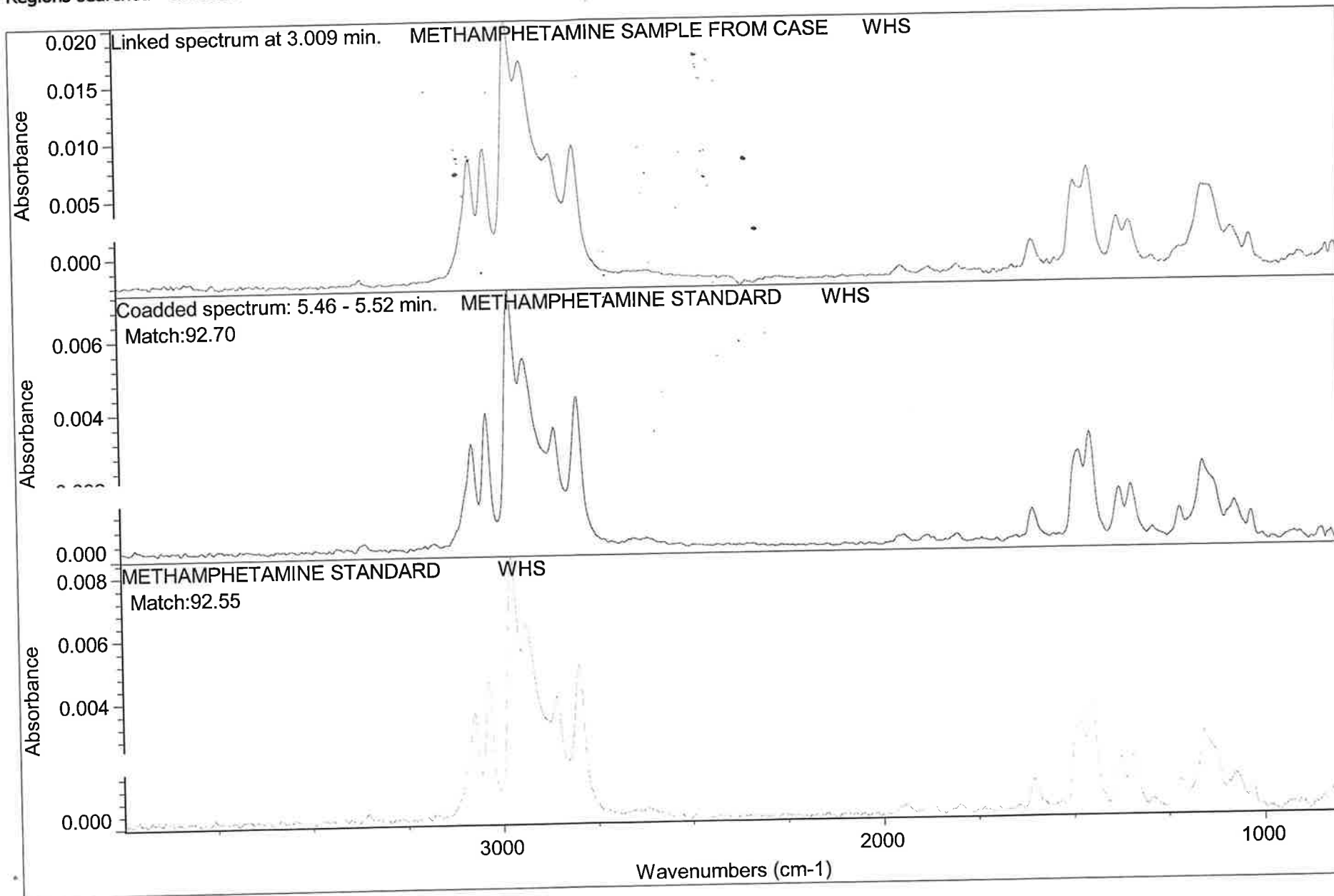
Gram-Schmidt

SAMPLE FROM CASE WHS

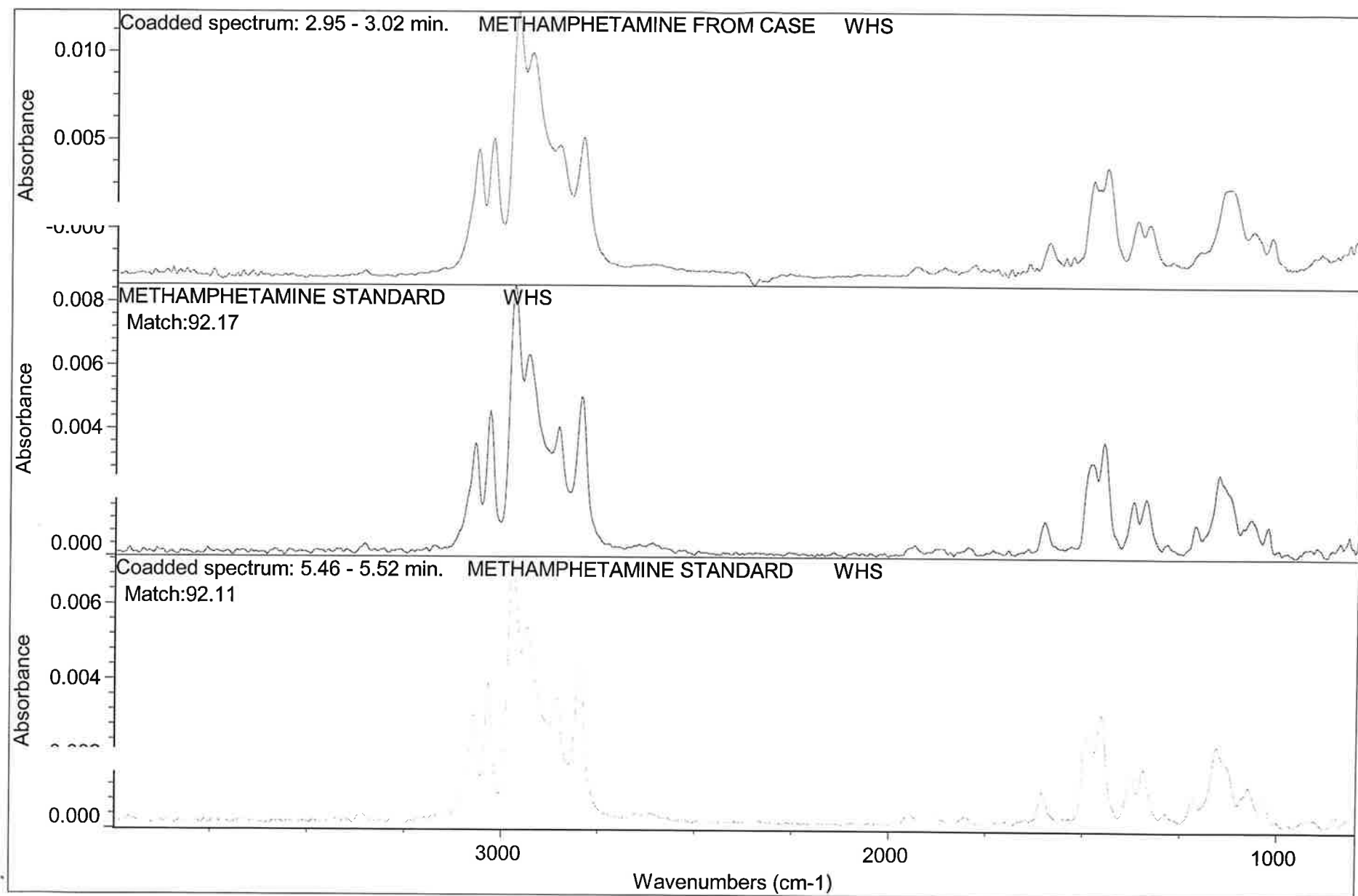
Scans: 1

Resolution: Unknown

Search results for: Linked spectrum at 3.009 min. METHAMPHETAMINE SAMPLE FROM CASE WHS
Date: Thu Jul 12 16:16:32 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



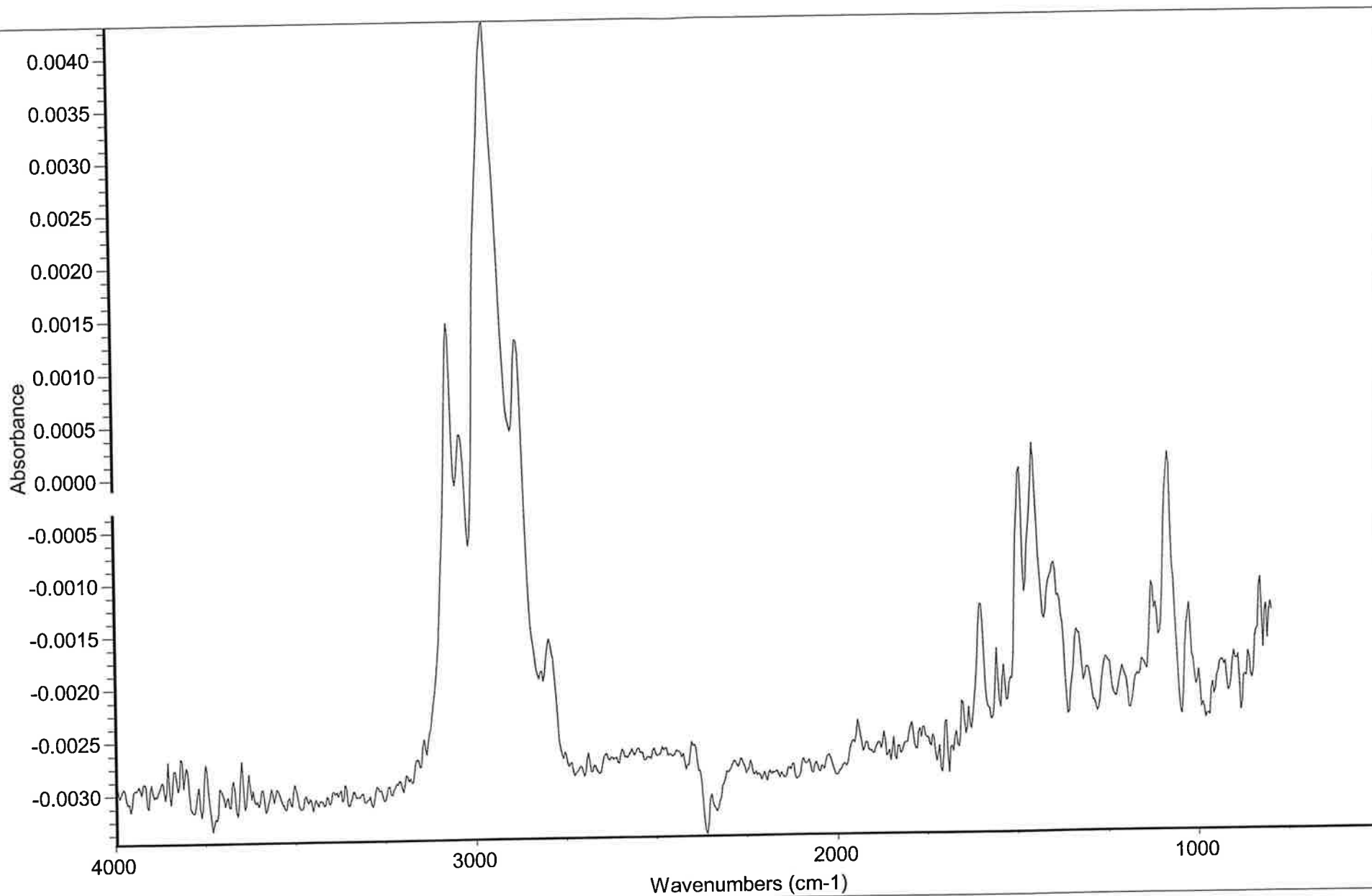
Search results for: Coadded spectrum: 2.95 - 3.02 min. METHAMPHETAMINE FROM CASE WHS
Date: Thu Jul 12 16:17:16 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.95 - 3.02 min. METHAMPHETAMINE FROM CASE WHS
Date: Thu Jul 12 16:17:16 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

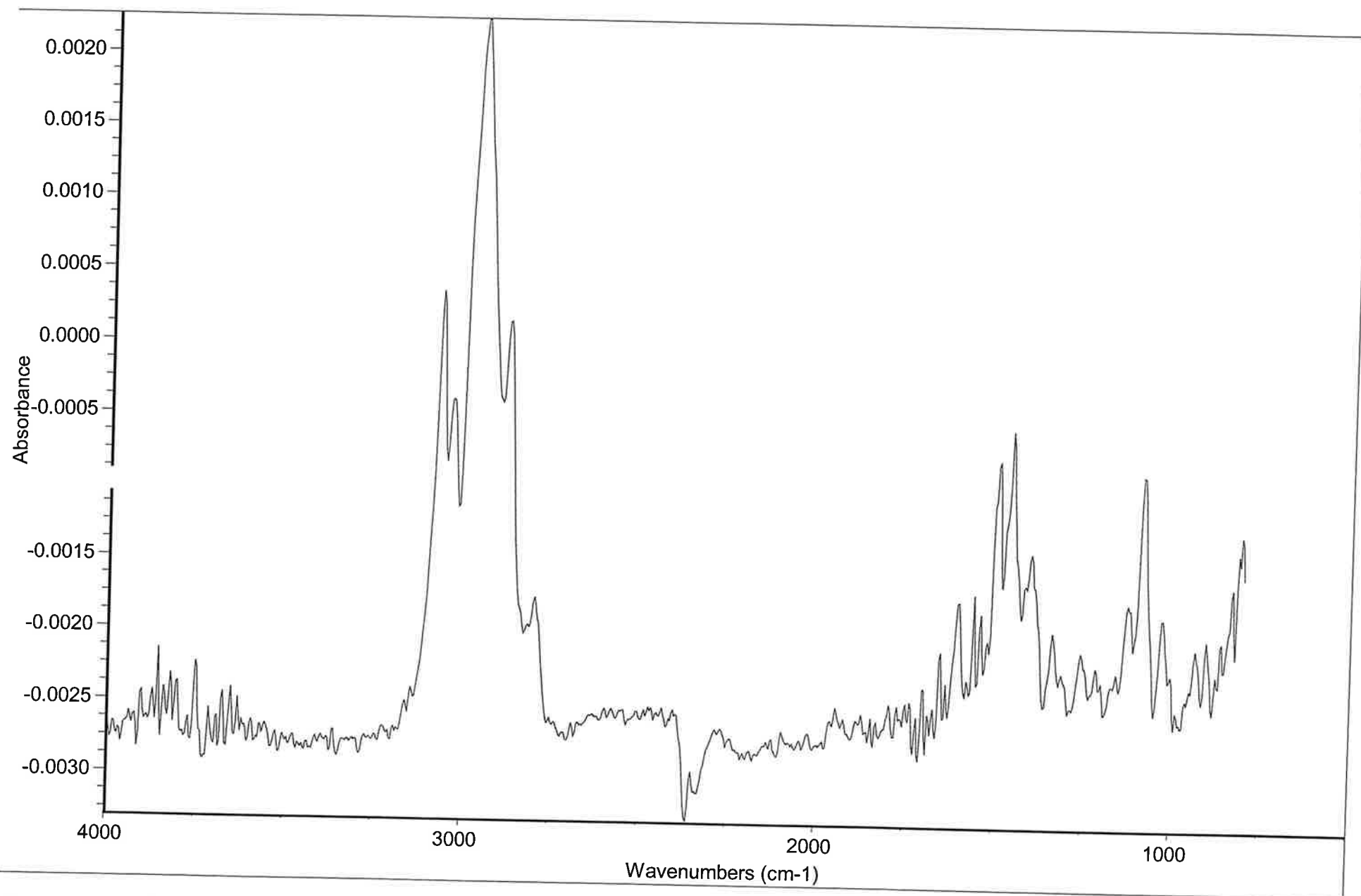
	Index	Match	Compound Name	Library Name
1	3	92.17	METHAMPHETAMINE STANDARD WHS	TEST
2	4	92.11	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
3	5	72.78	PHENTERMINE STANDARD WHS	TEST
4	6	72.76	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
5	31	67.33	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library



Linked spectrum at 3.190 min. ? WHS

IR #1

Collection time: Thu Jul 12 16:07:58 2001

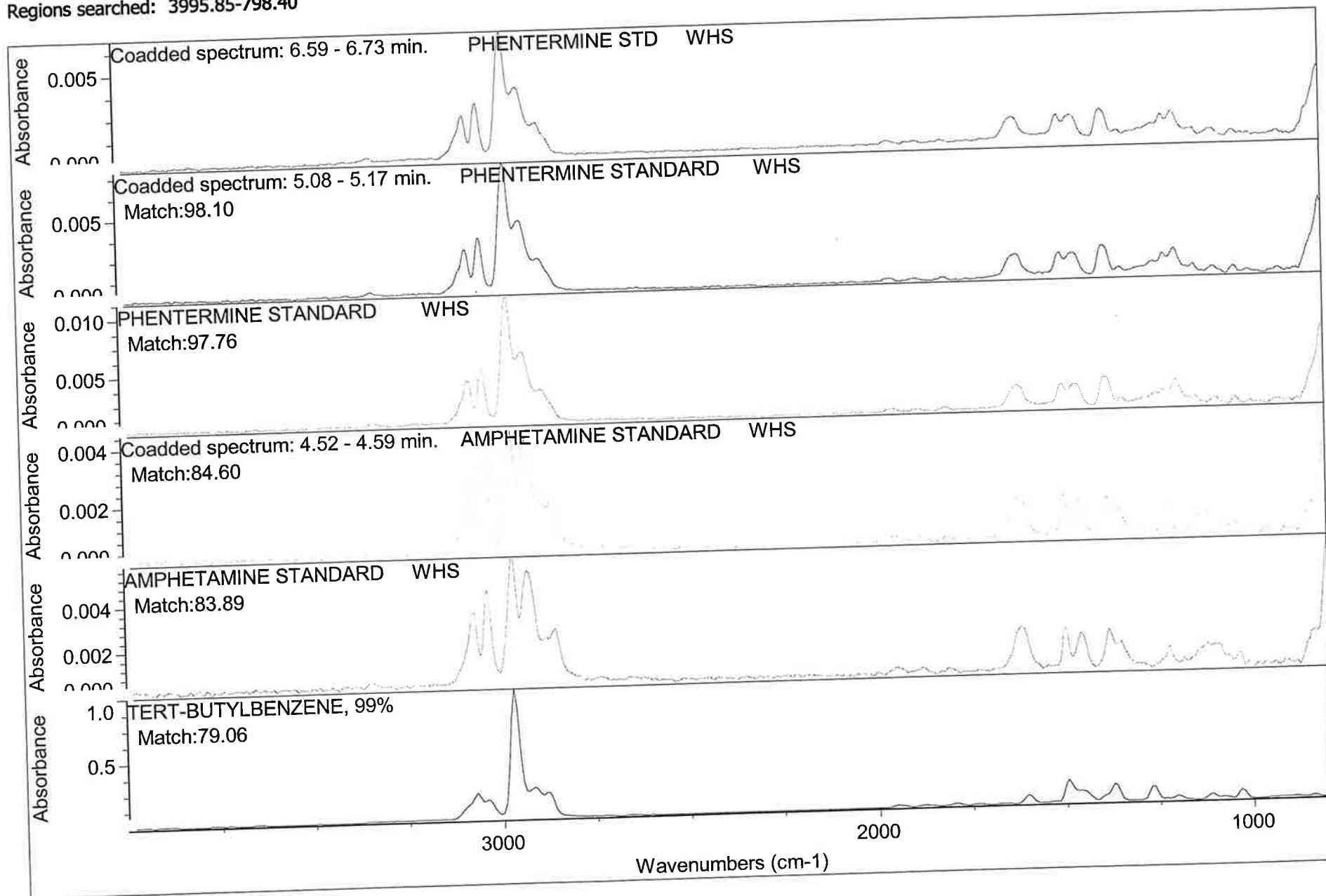


Coadded spectrum: 3.16 - 3.20 min. ? WHS

IR #1

Collection time: Thu Jul 12 16:17:25 2001

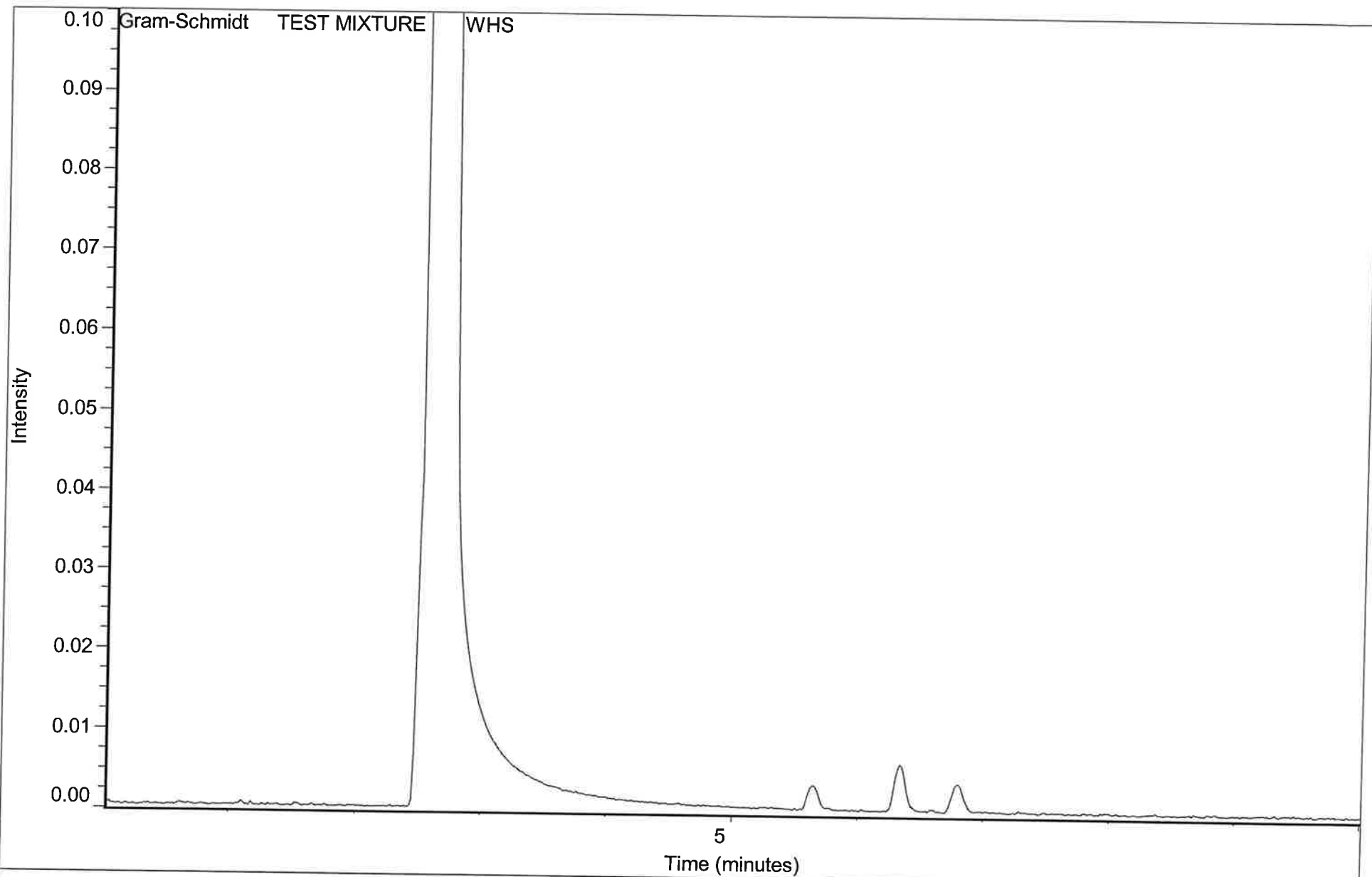
Search results for: Coadded spectrum: 6.59 - 6.73 min. PHENTERMINE STD WHS
Date: Thu Jul 12 12:46:39 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.59 - 6.73 min. PHENTERMINE STD WHS
Date: Thu Jul 12 12:46:39 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	6	98.10	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	97.76	PHENTERMINE STANDARD WHS	TEST
3	2	84.60	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	83.89	AMPHETAMINE STANDARD WHS	TEST
5	4	79.06	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library

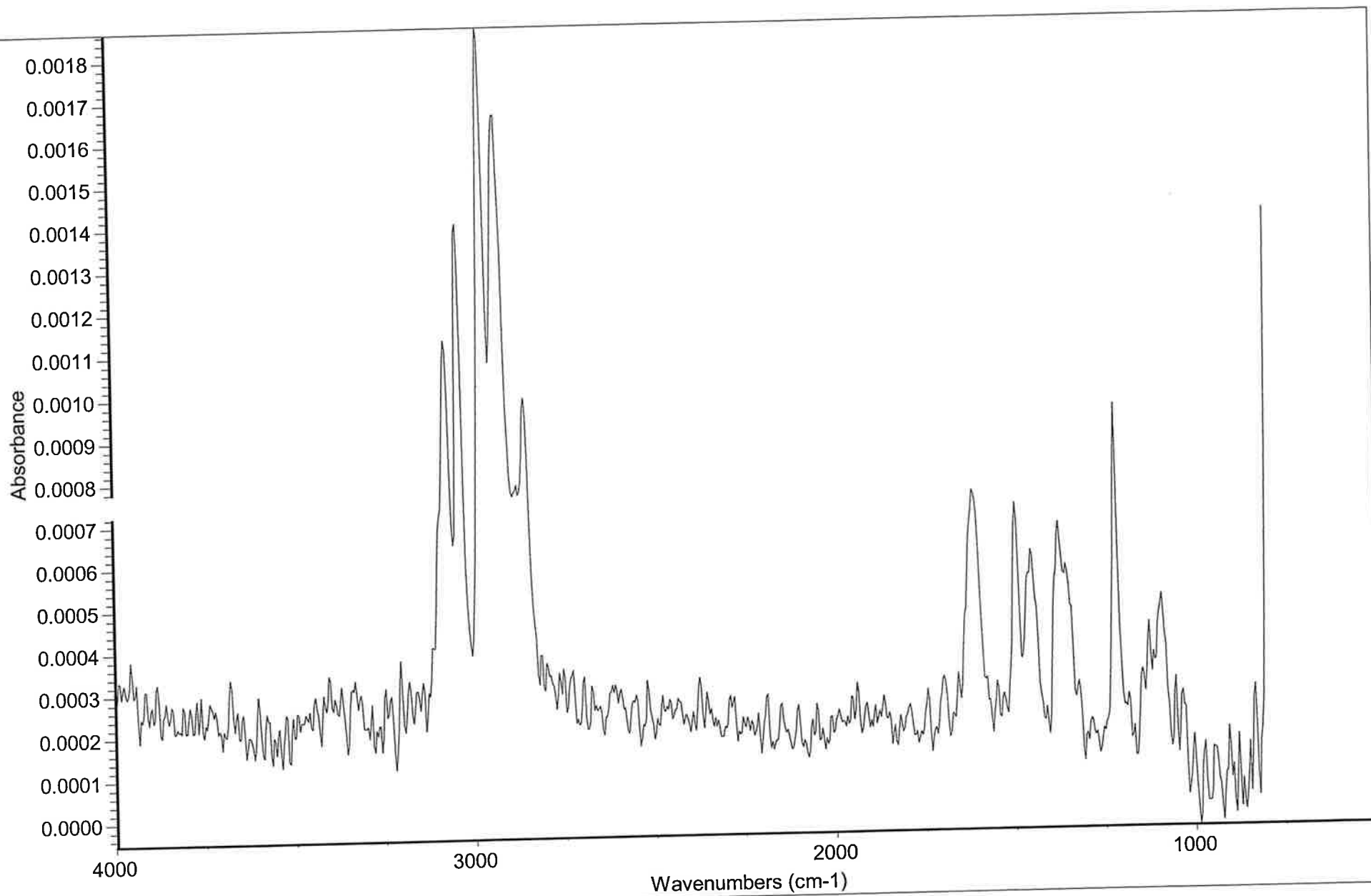


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.007 min.

Scans: 4

Resolution: 8.000

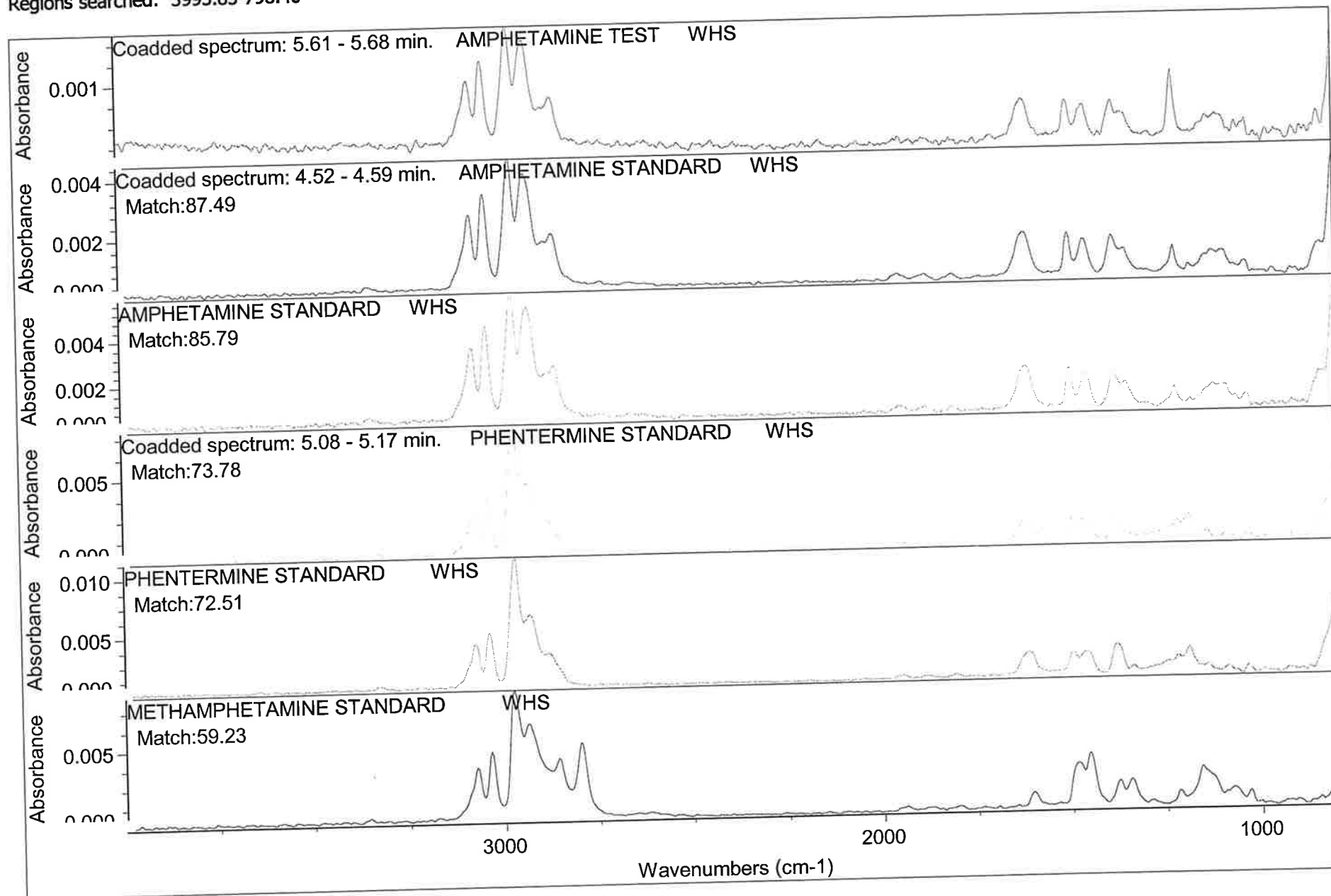


Linked spectrum at 5.639 min. AMPHETAMINE TEST WHS

IR #1

Collection time: Thu Jul 12 12:21:56 2001

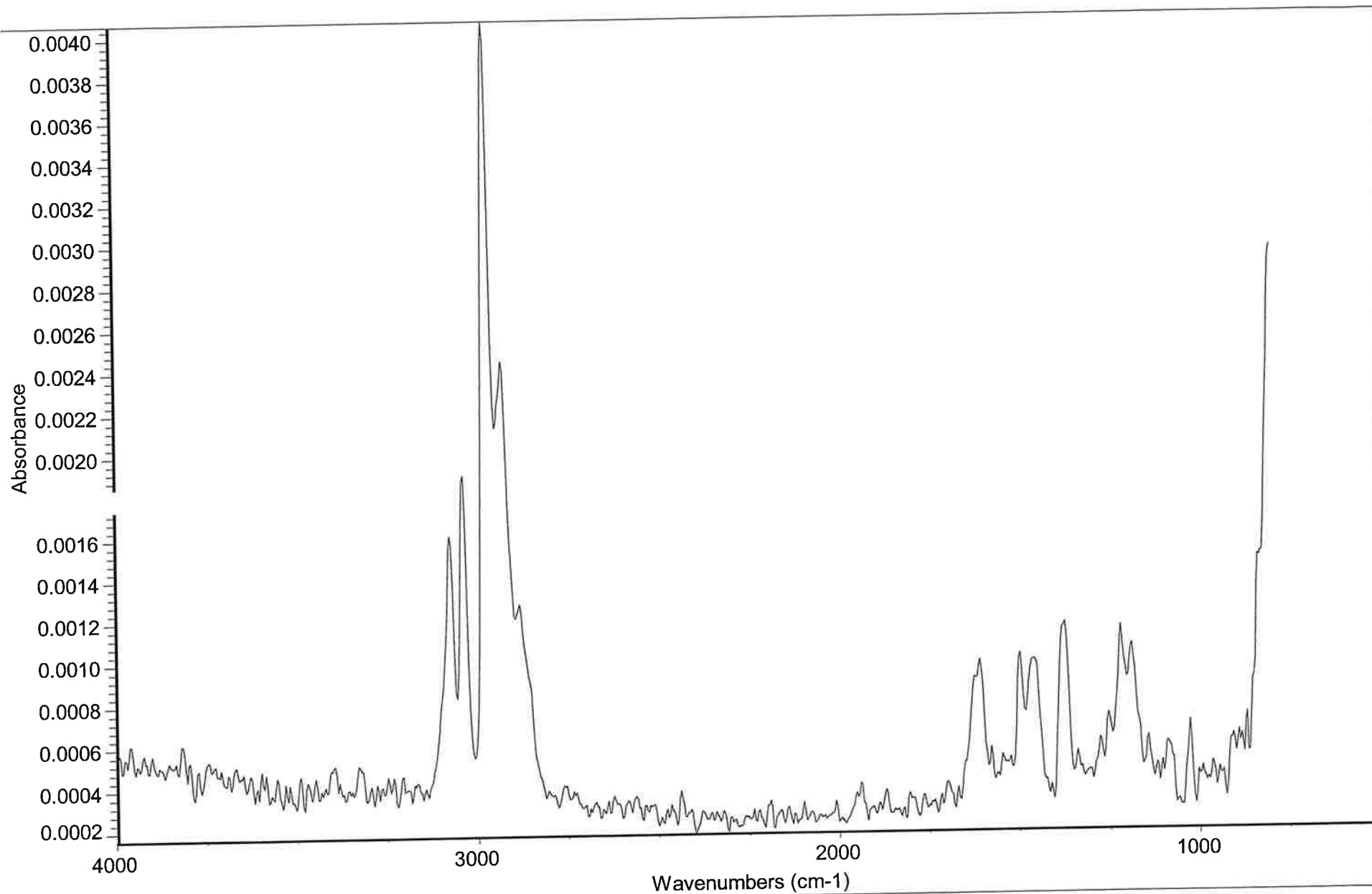
Search results for: Coadded spectrum: 5.61 - 5.68 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 12:48:25 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.61 - 5.68 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 12:48:25 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	2	87.49	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	85.79	AMPHETAMINE STANDARD WHS	TEST
3	6	73.78	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	72.51	PHENTERMINE STANDARD WHS	TEST
5	3	59.23	METHAMPHETAMINE STANDARD WHS	TEST

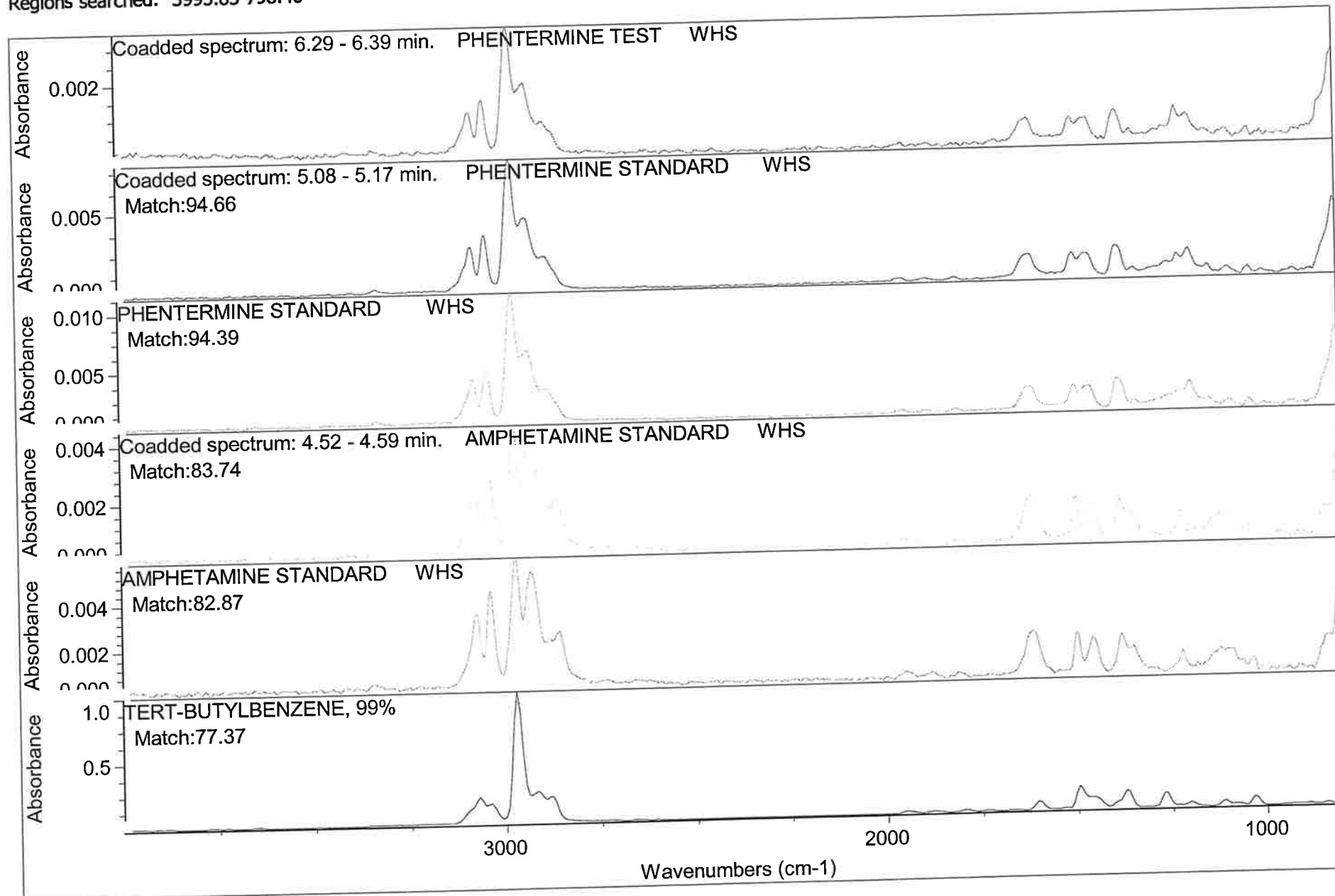


Linked spectrum at 6.334 min. PHENTERMINE STD WHS

IR #1

Collection time: Thu Jul 12 12:22:38 2001

Search results for: Coadded spectrum: 6.29 - 6.39 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 12:50:07 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

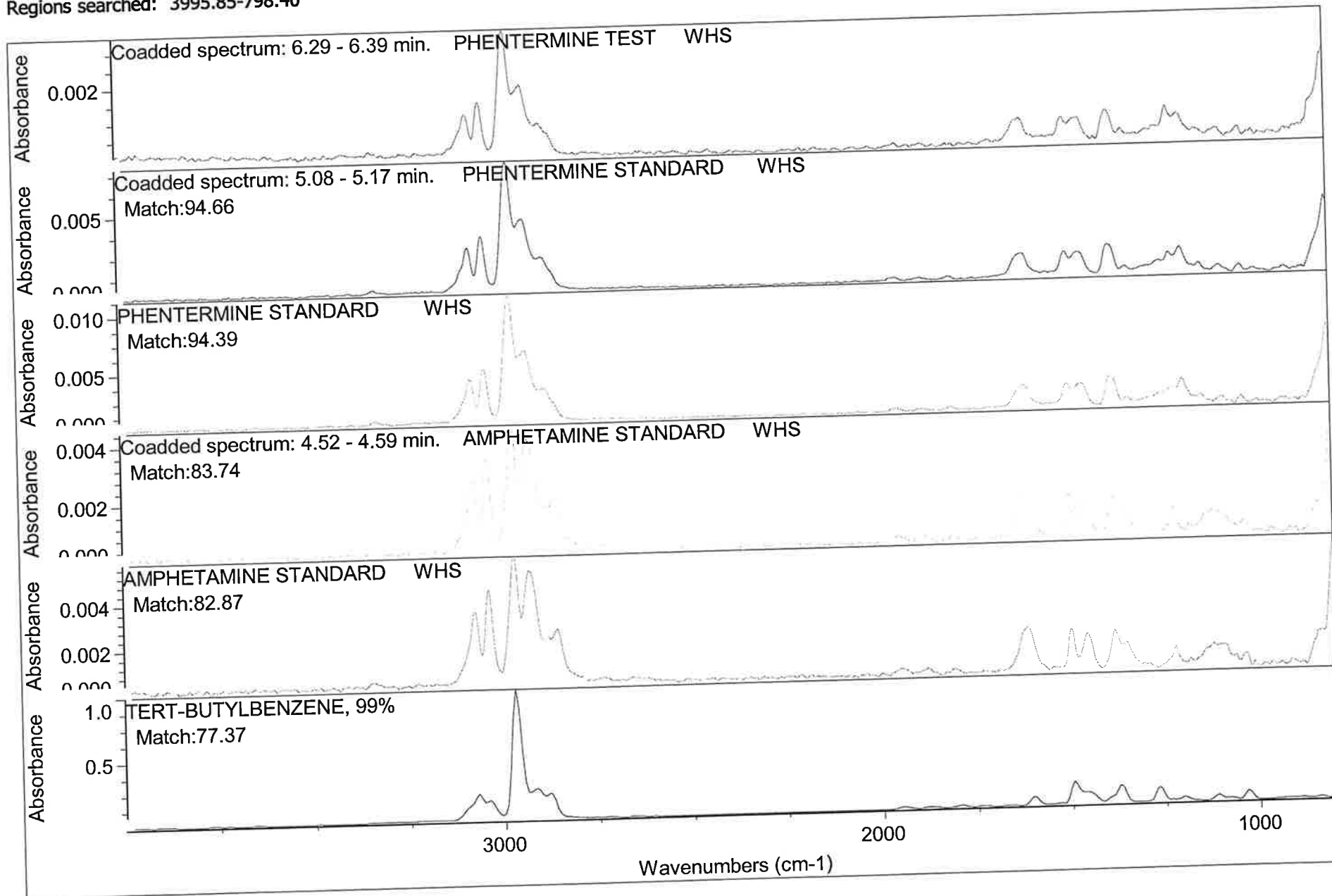


Search results for: Coadded spectrum: 6.29 - 6.39 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 12:50:07 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	6	94.66	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	94.39	PHENTERMINE STANDARD WHS	TEST
3	2	83.74	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	82.87	AMPHETAMINE STANDARD WHS	TEST
5	4	77.37	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library

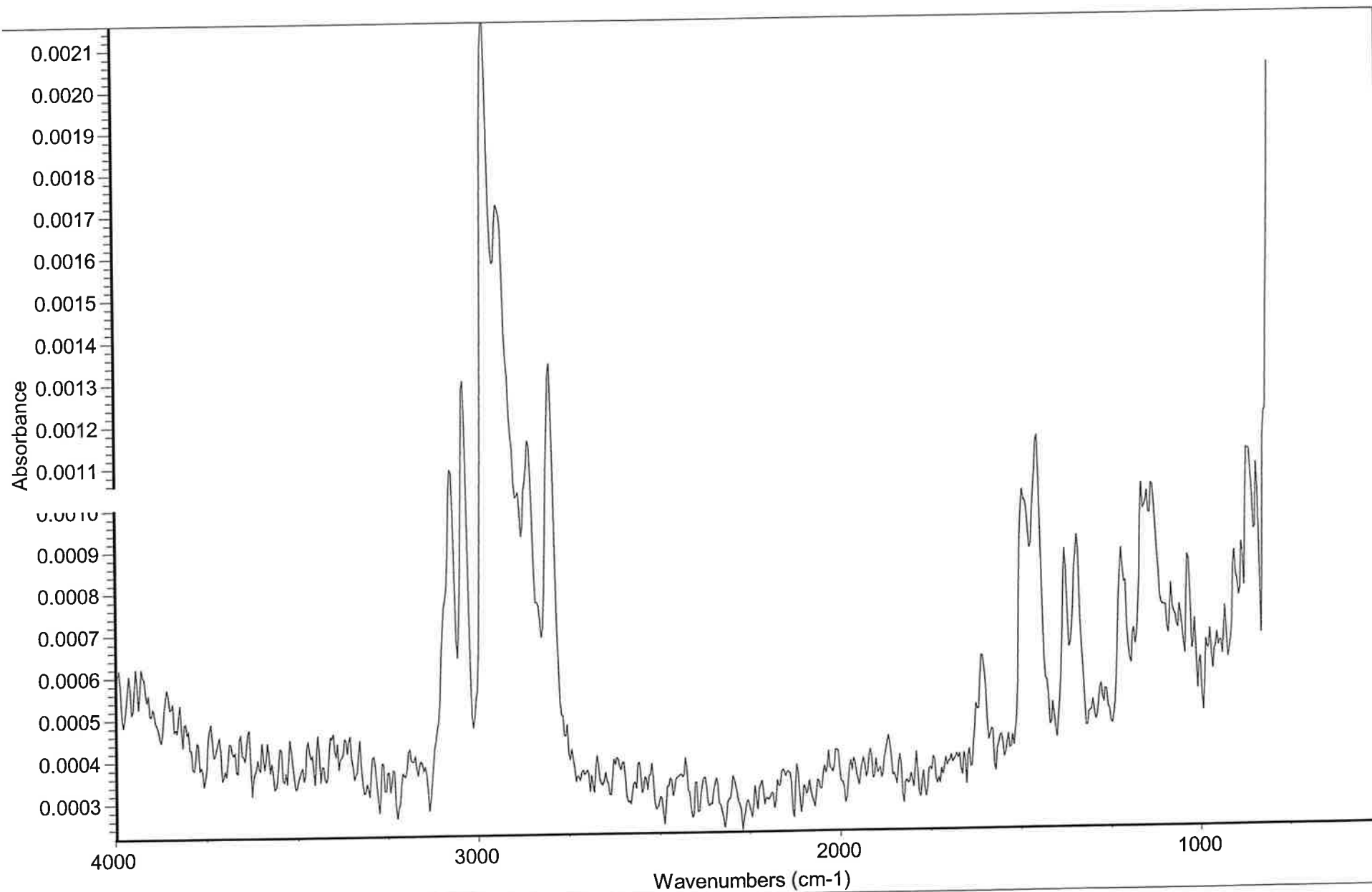
Search results for: Coadded spectrum: 6.29 - 6.39 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 12:50:33 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.29 - 6.39 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 12:50:33 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	6	94.66	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	94.39	PHENTERMINE STANDARD WHS	TEST
3	2	83.74	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	82.87	AMPHETAMINE STANDARD WHS	TEST
5	4	77.37	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library

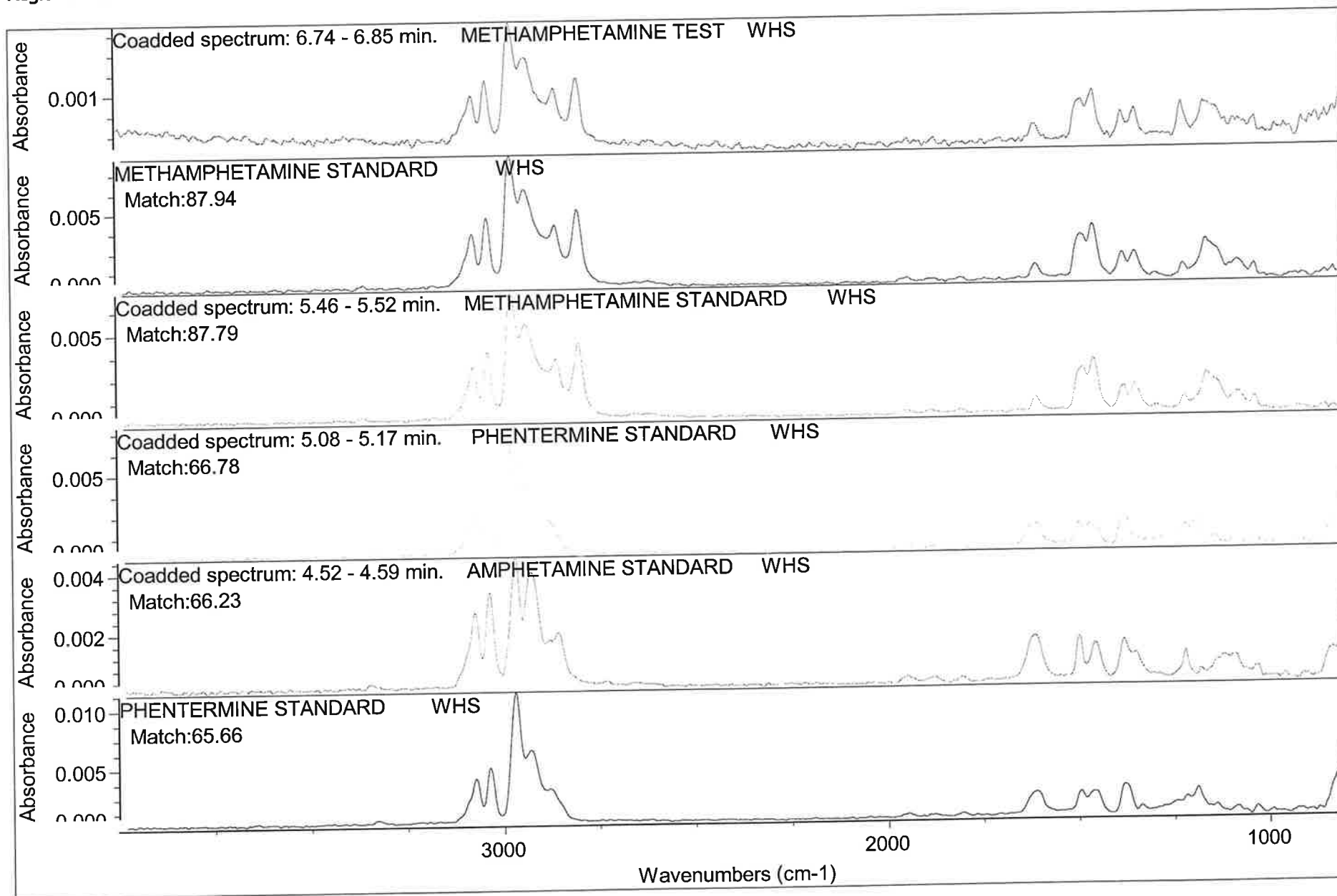


Linked spectrum at 6.788 min. METHAMPHETAMINE TEST

IR #1

Collection time: Thu Jul 12 12:23:05 2001

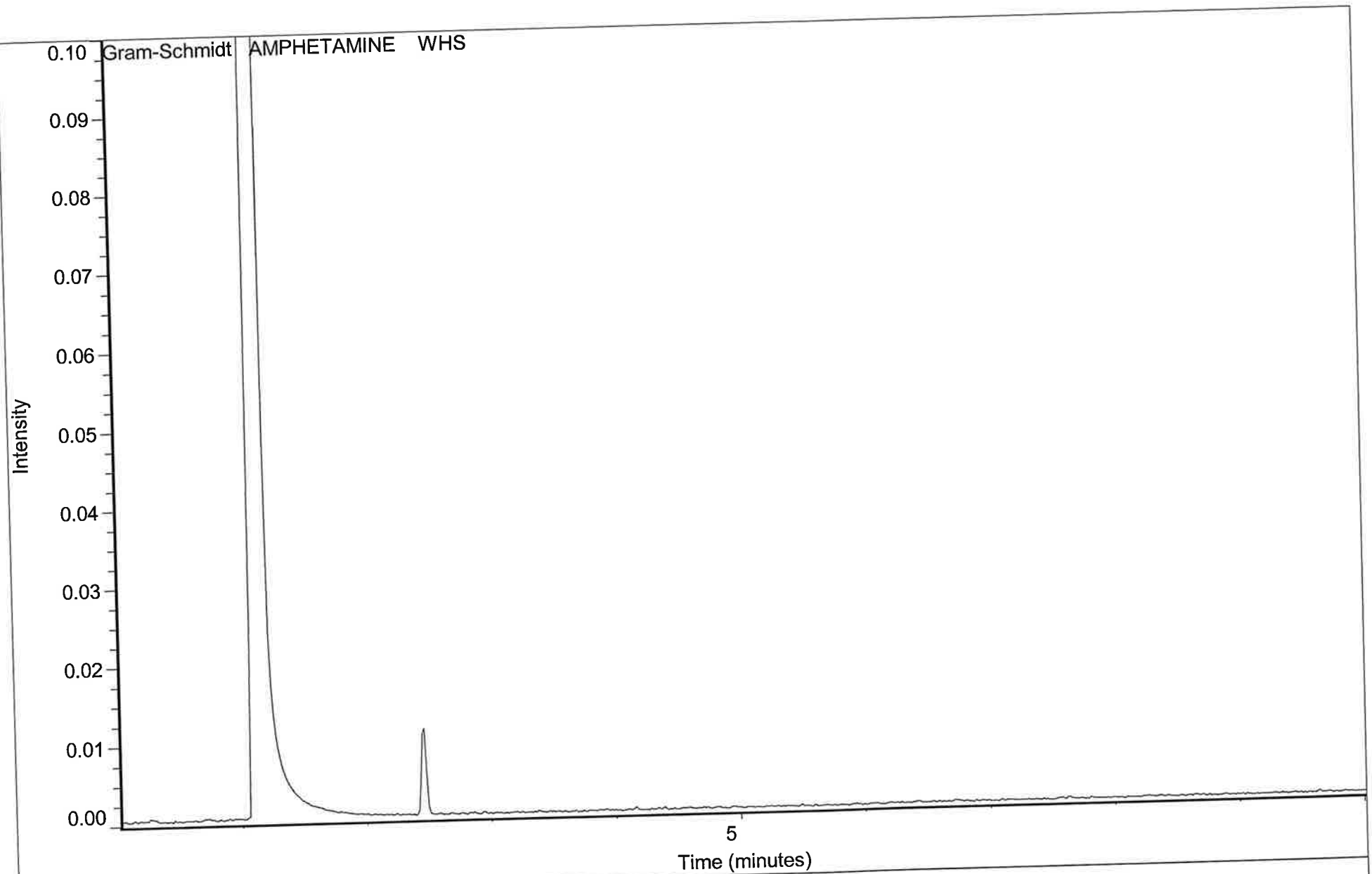
Search results for: Coadded spectrum: 6.74 - 6.85 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 12:51:43 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.74 - 6.85 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 12:51:43 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	3	87.94	METHAMPHETAMINE STANDARD WHS	TEST
2	4	87.79	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
3	6	66.78	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	2	66.23	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
5	5	65.66	PHENTERMINE STANDARD WHS	TEST

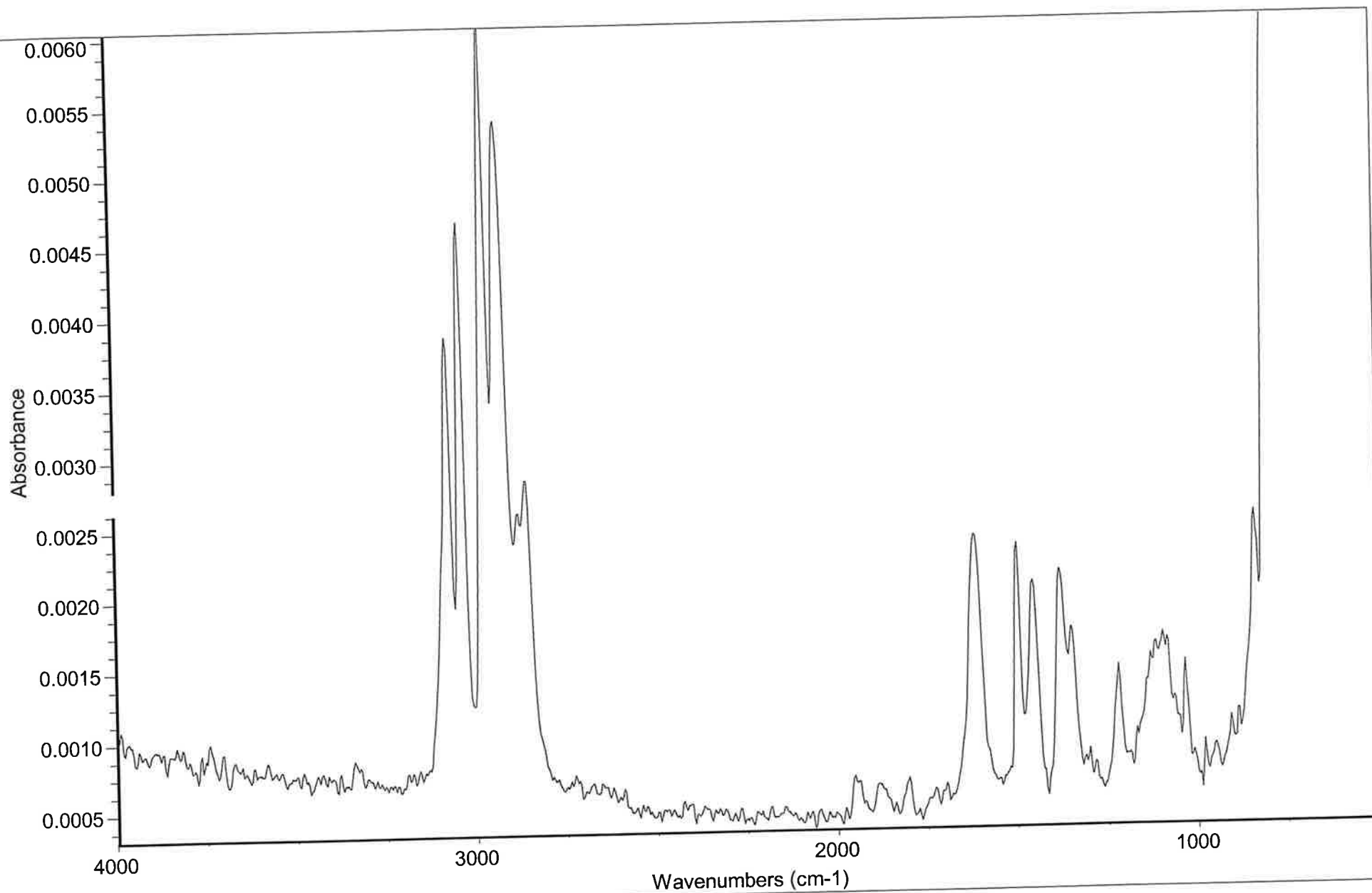


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.009 min.

Scans: 4

Resolution: 8.000

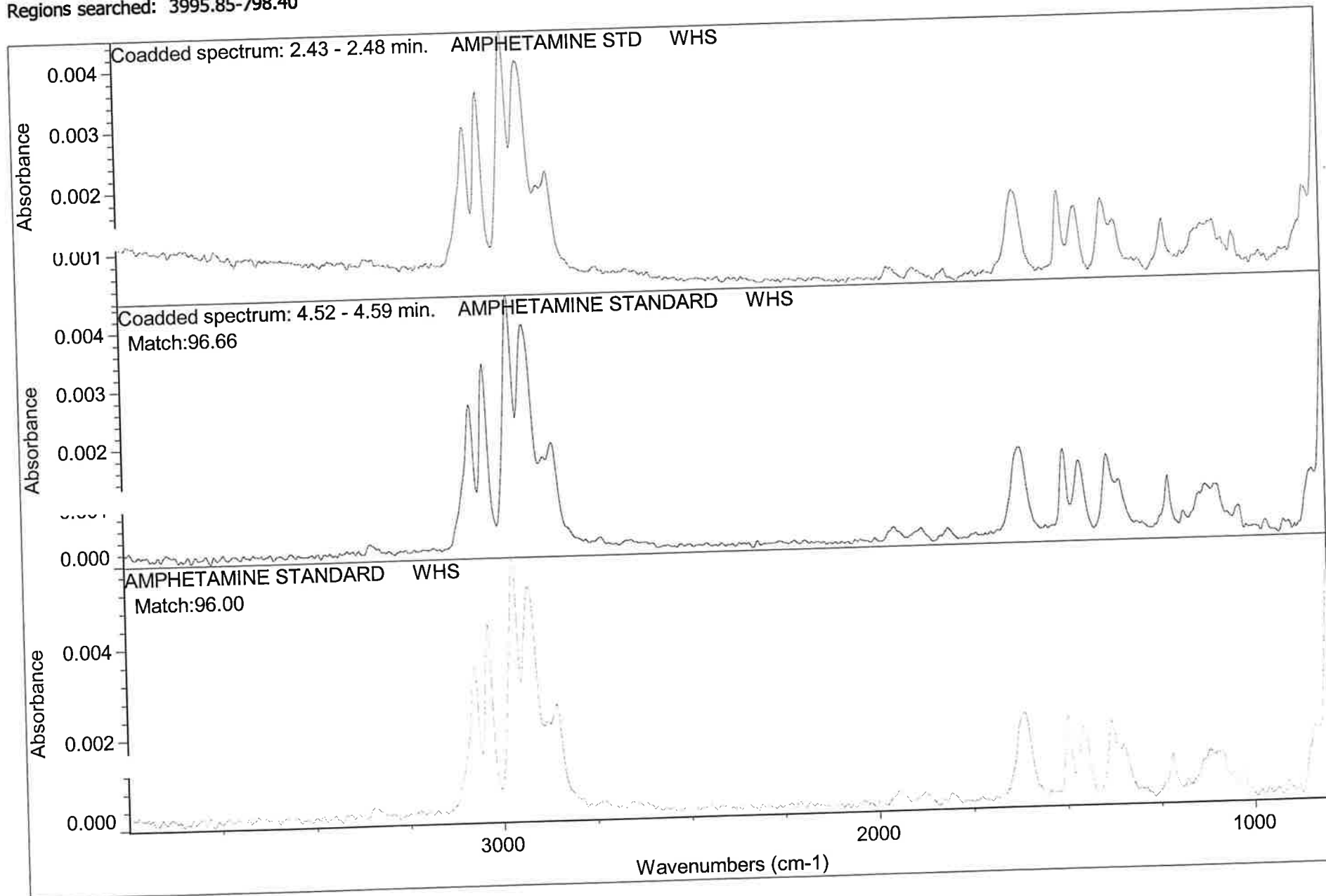


Linked spectrum at 2.466 min. AMPHETAMINE STD WHS

IR #1

Collection time: Thu Jul 12 12:56:33 2001

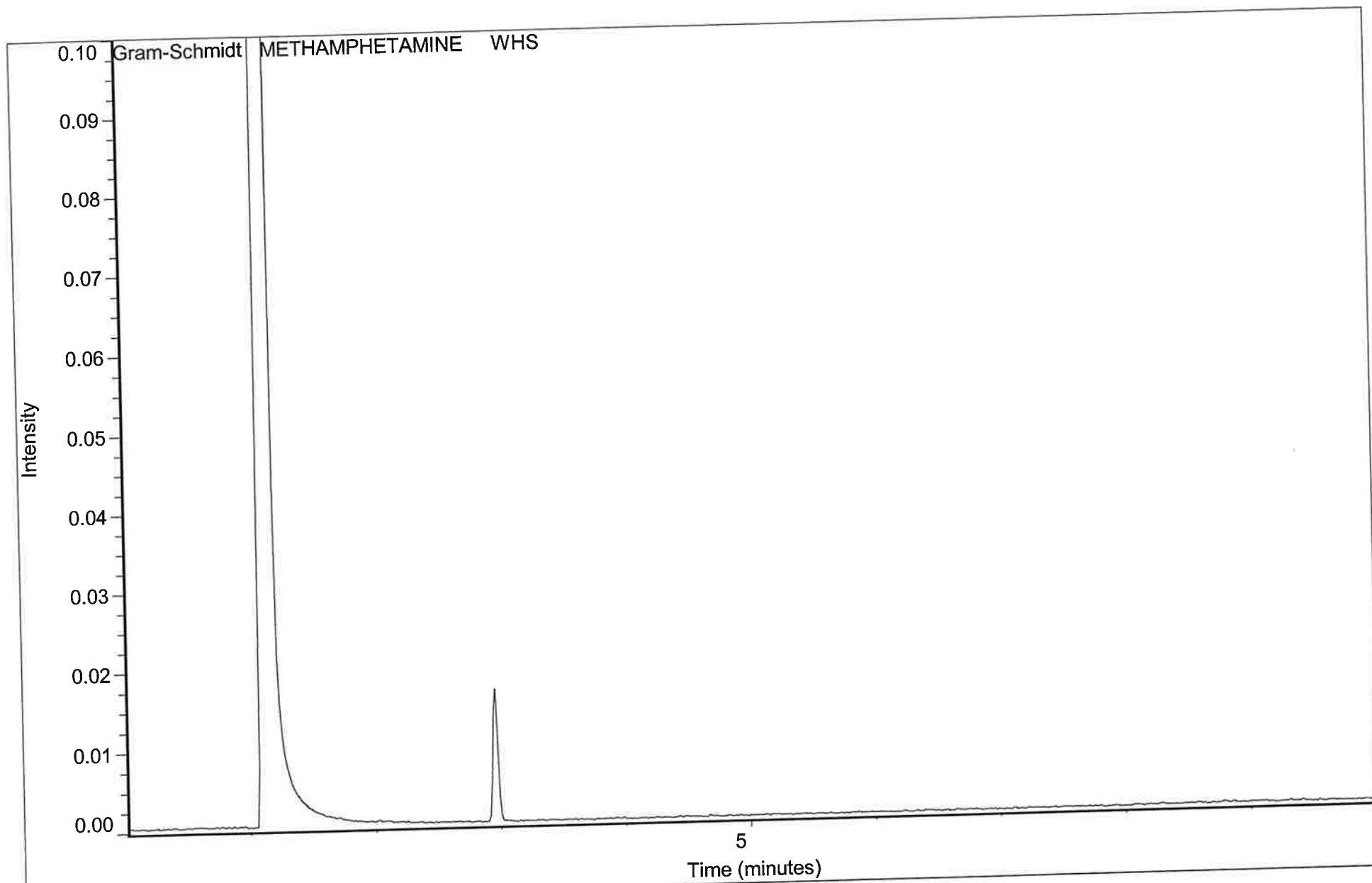
Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 14:15:05 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 14:15:05 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	2	96.66	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	96.00	AMPHETAMINE STANDARD WHS	TEST
3	6	84.50	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	84.27	PHENTERMINE STANDARD WHS	TEST
5	3	65.56	METHAMPHETAMINE STANDARD WHS	TEST

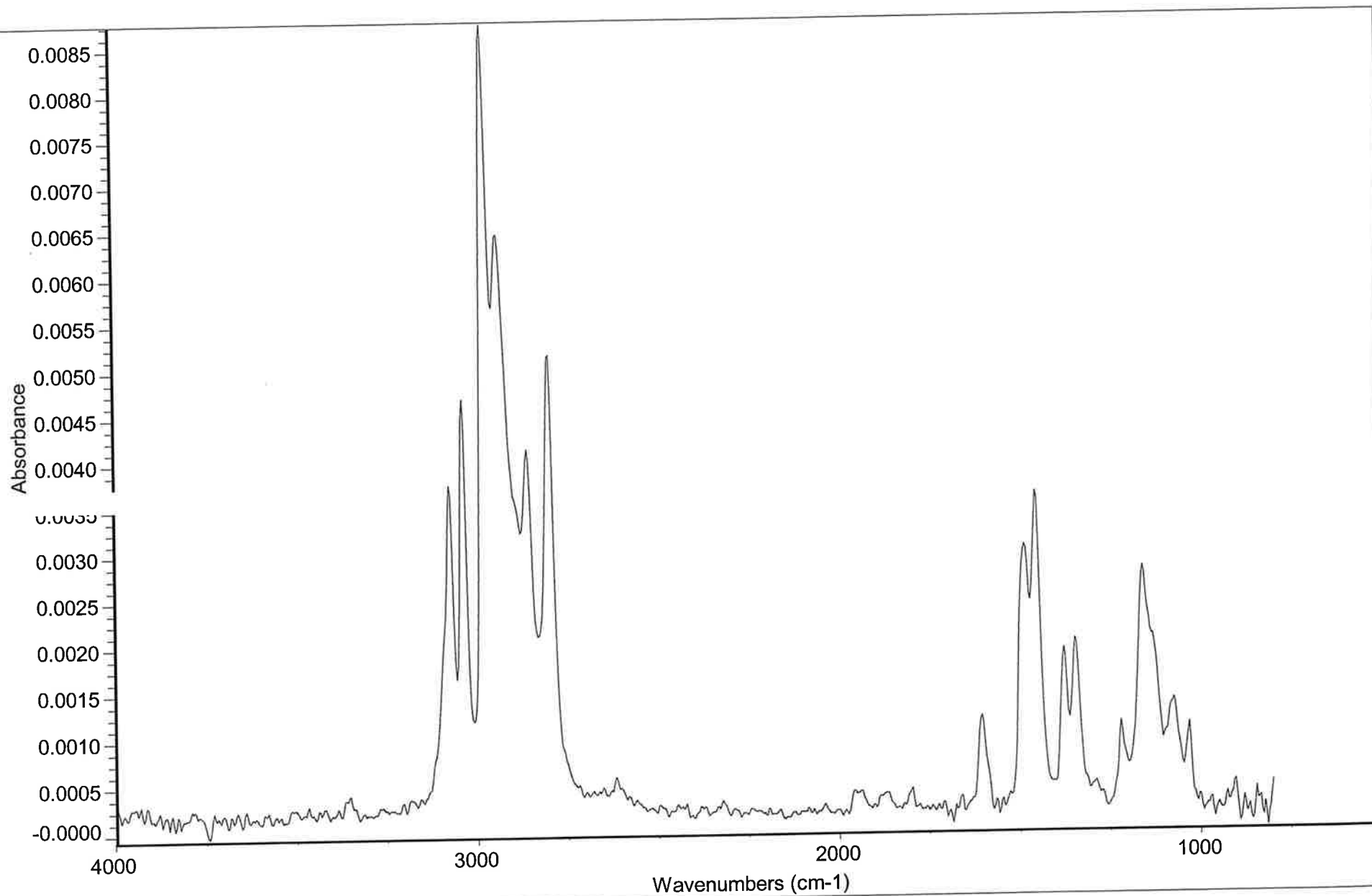


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.004 min.

Scans: 4

Resolution: 8.000

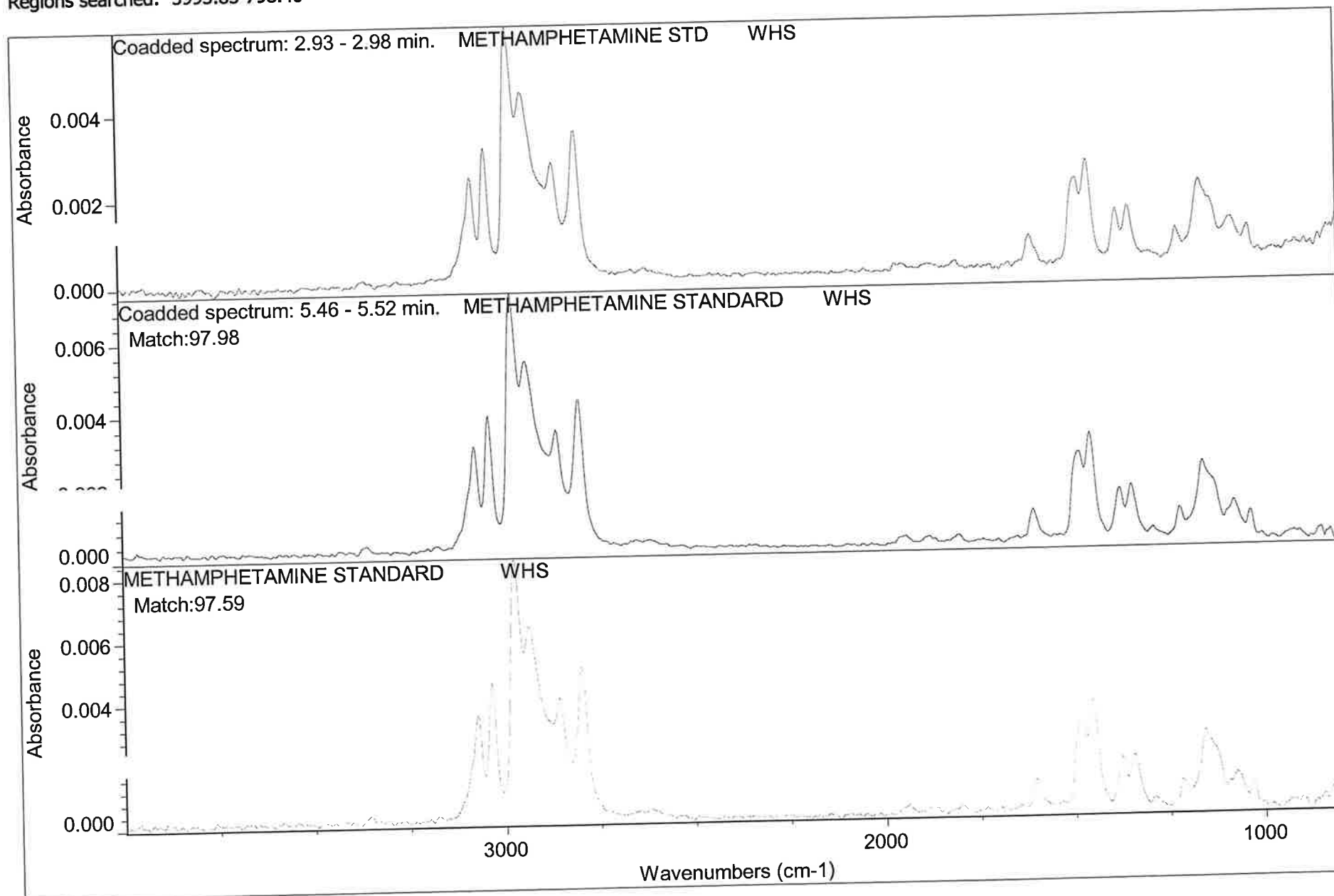


Linked spectrum at 2.963 min. METHAMPHETAMINE STD WHS

IR #1

Collection time: Thu Jul 12 13:07:51 2001

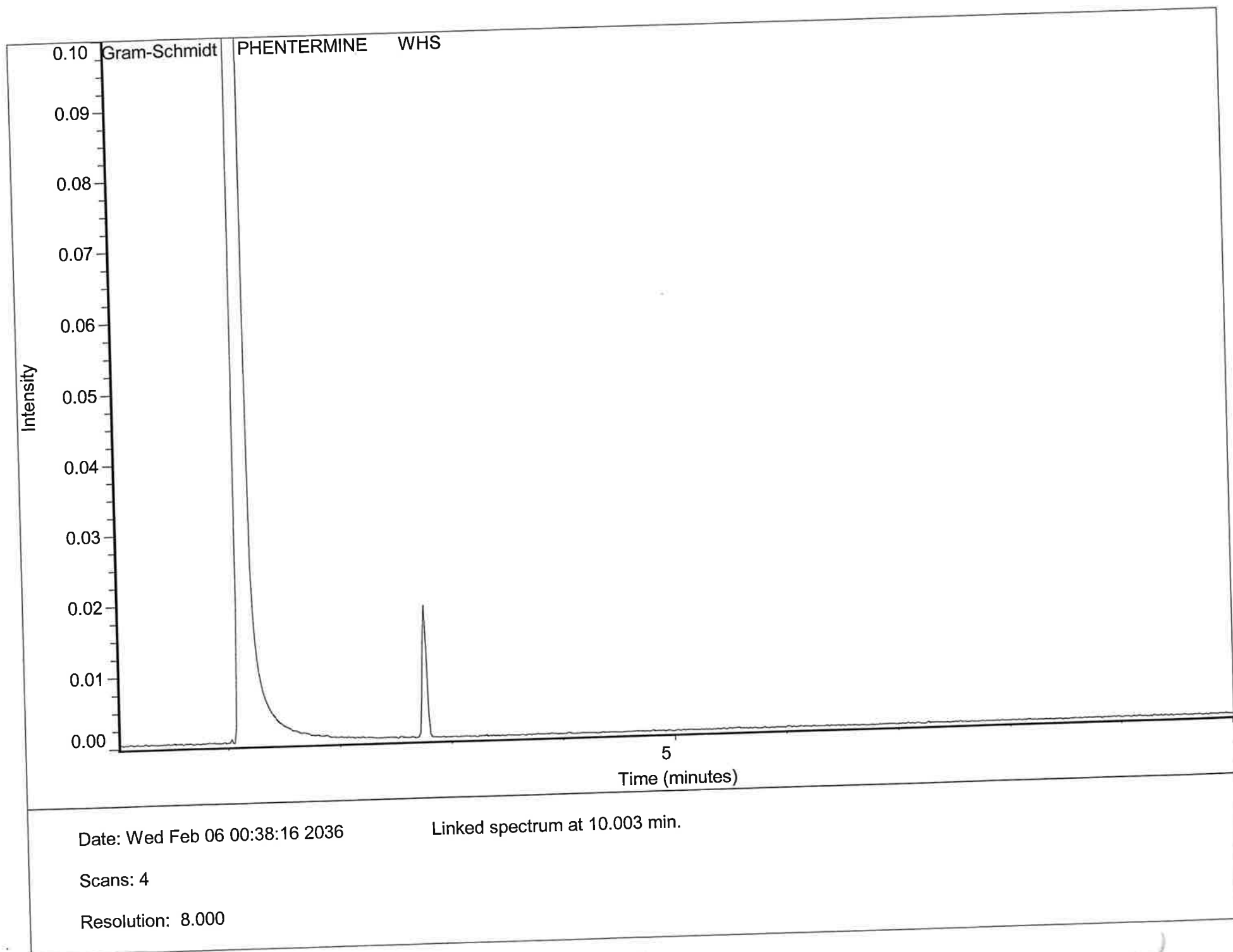
Search results for: Coadded spectrum: 2.93 - 2.98 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 14:16:36 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

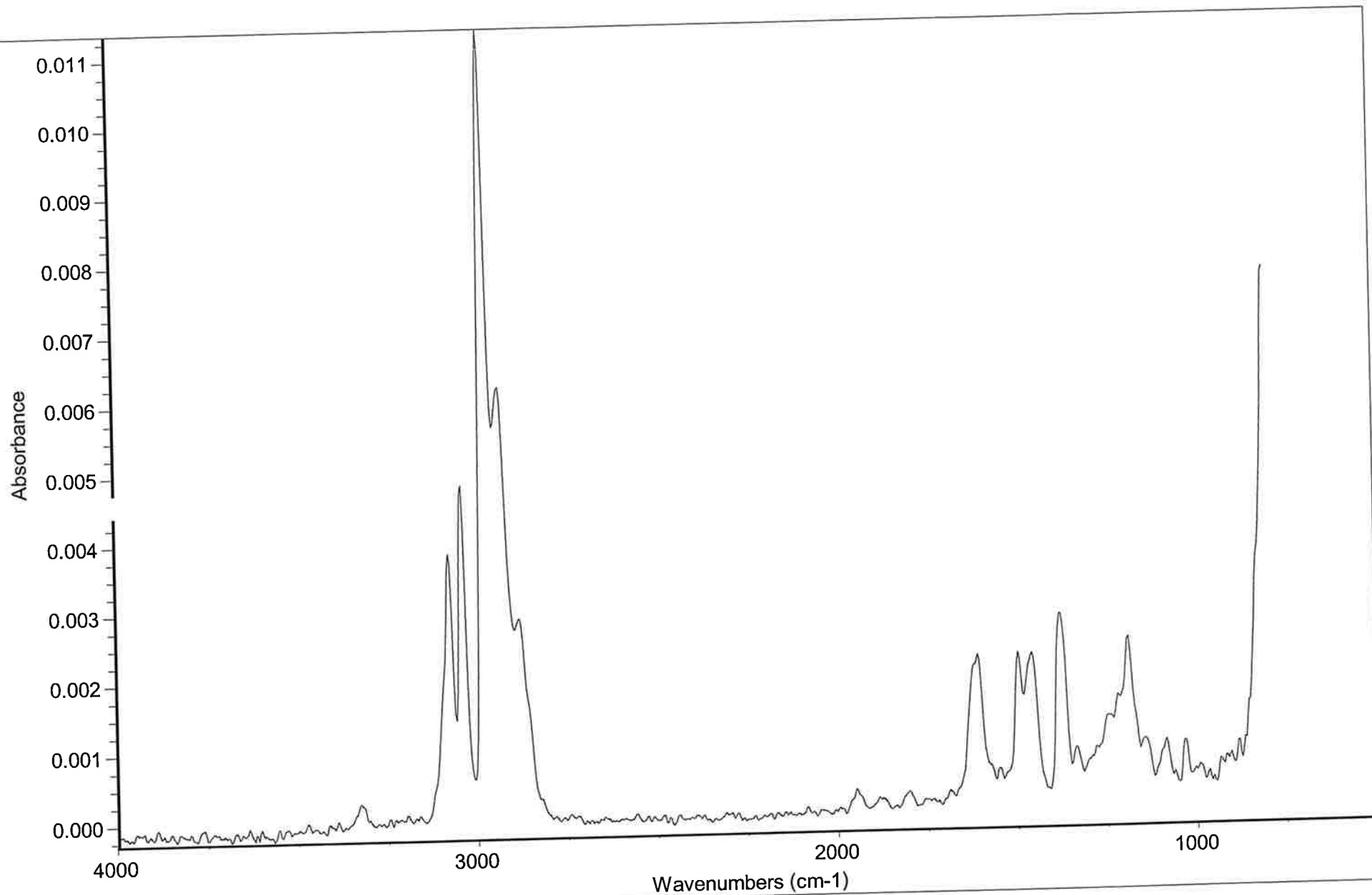


Search results for: Coadded spectrum: 2.93 - 2.98 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 14:16:36 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	97.98	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	97.59	METHAMPHETAMINE STANDARD WHS	TEST
3	6	70.68	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	70.00	PHENTERMINE STANDARD WHS	TEST
5	2	67.03	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST



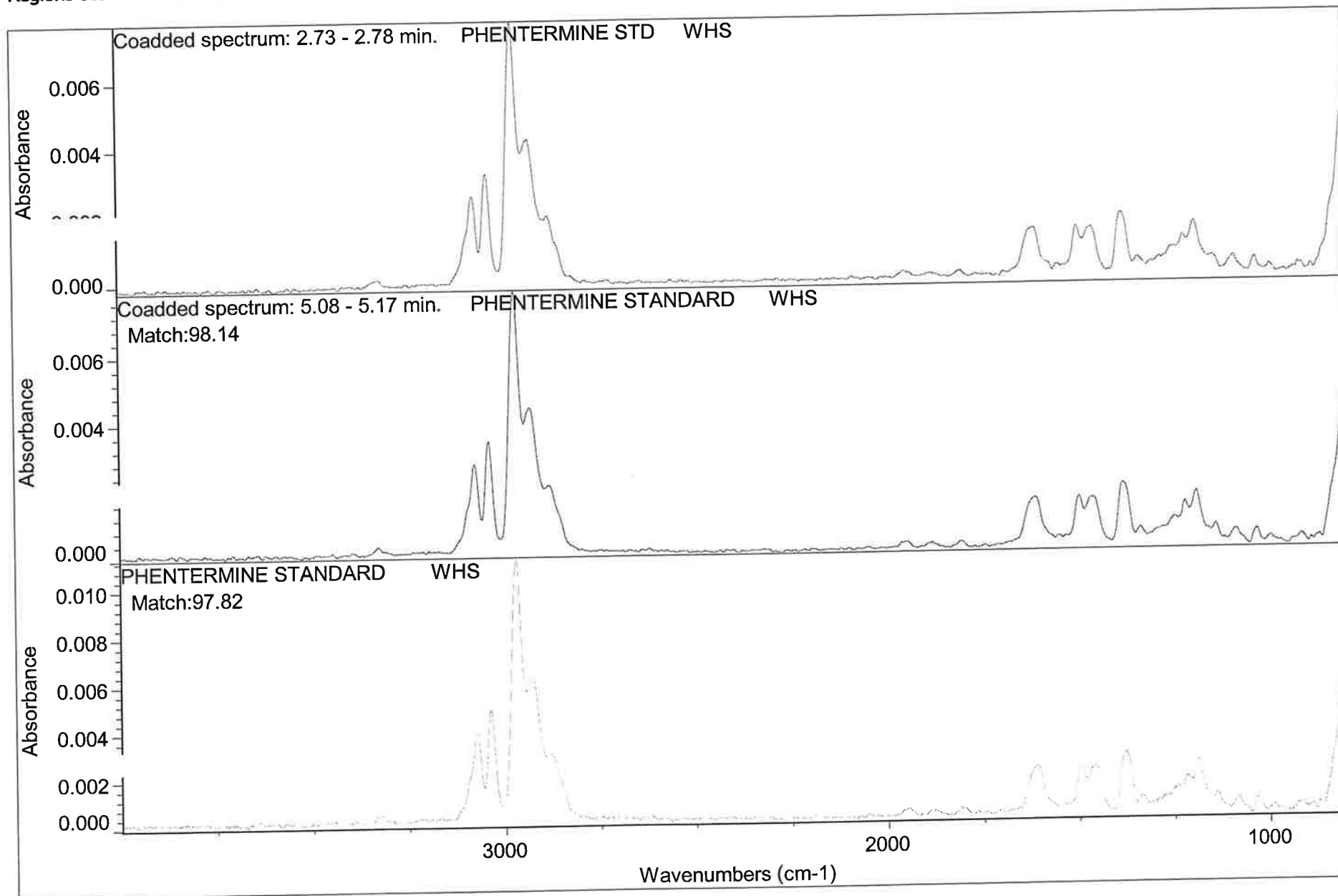


Linked spectrum at 2.765 min. PHENTERMINE STD WHS

IR #1

Collection time: Thu Jul 12 13:18:33 2001

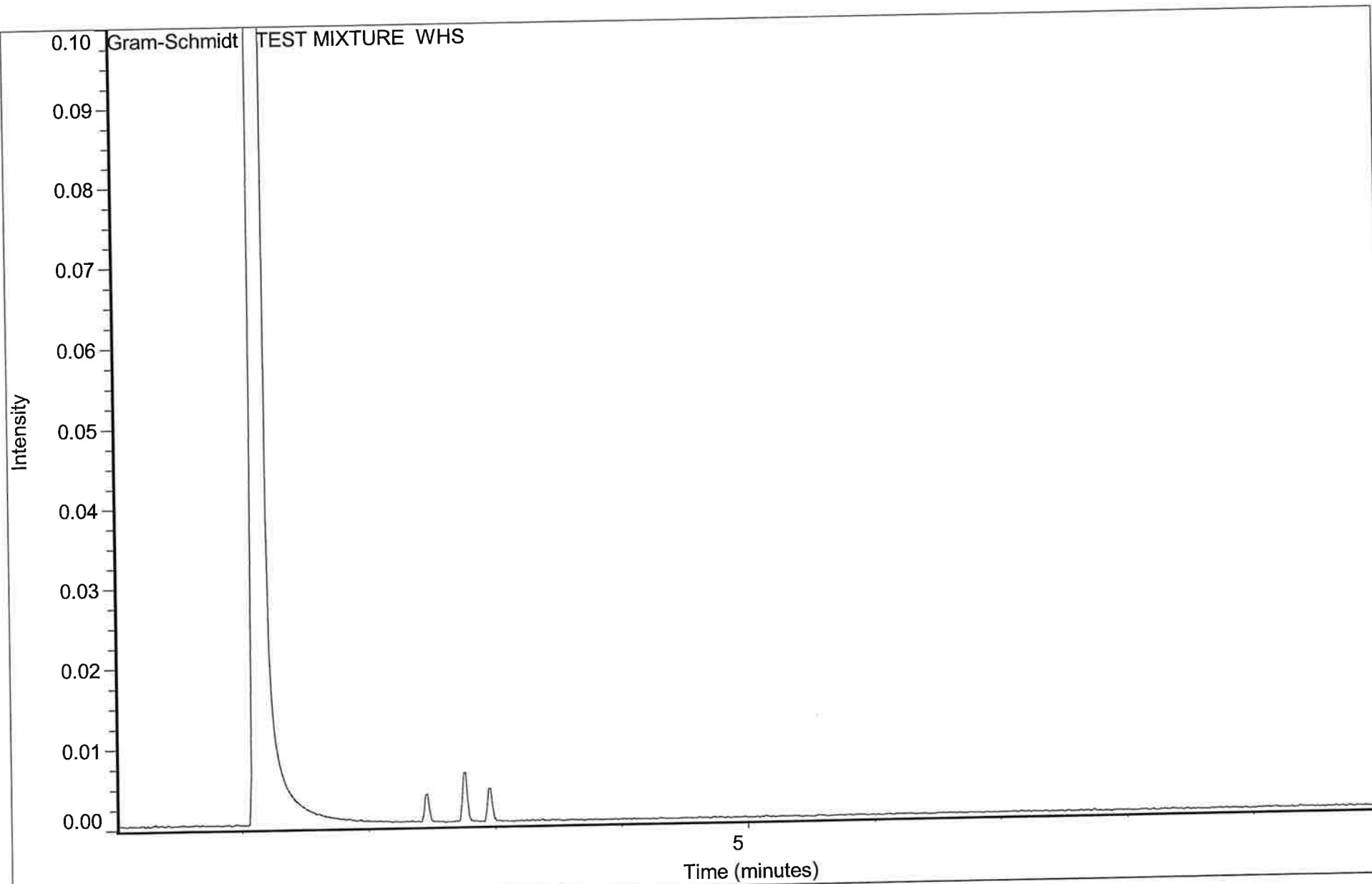
Search results for: Coadded spectrum: 2.73 - 2.78 min. PHENTERMINE STD WHS
Date: Thu Jul 12 14:18:15 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.73 - 2.78 min. PHENTERMINE STD WHS
Date: Thu Jul 12 14:18:15 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	6	98.14	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	97.82	PHENTERMINE STANDARD WHS	TEST
3	2	85.17	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	84.82	AMPHETAMINE STANDARD WHS	TEST
5	4	78.99	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library

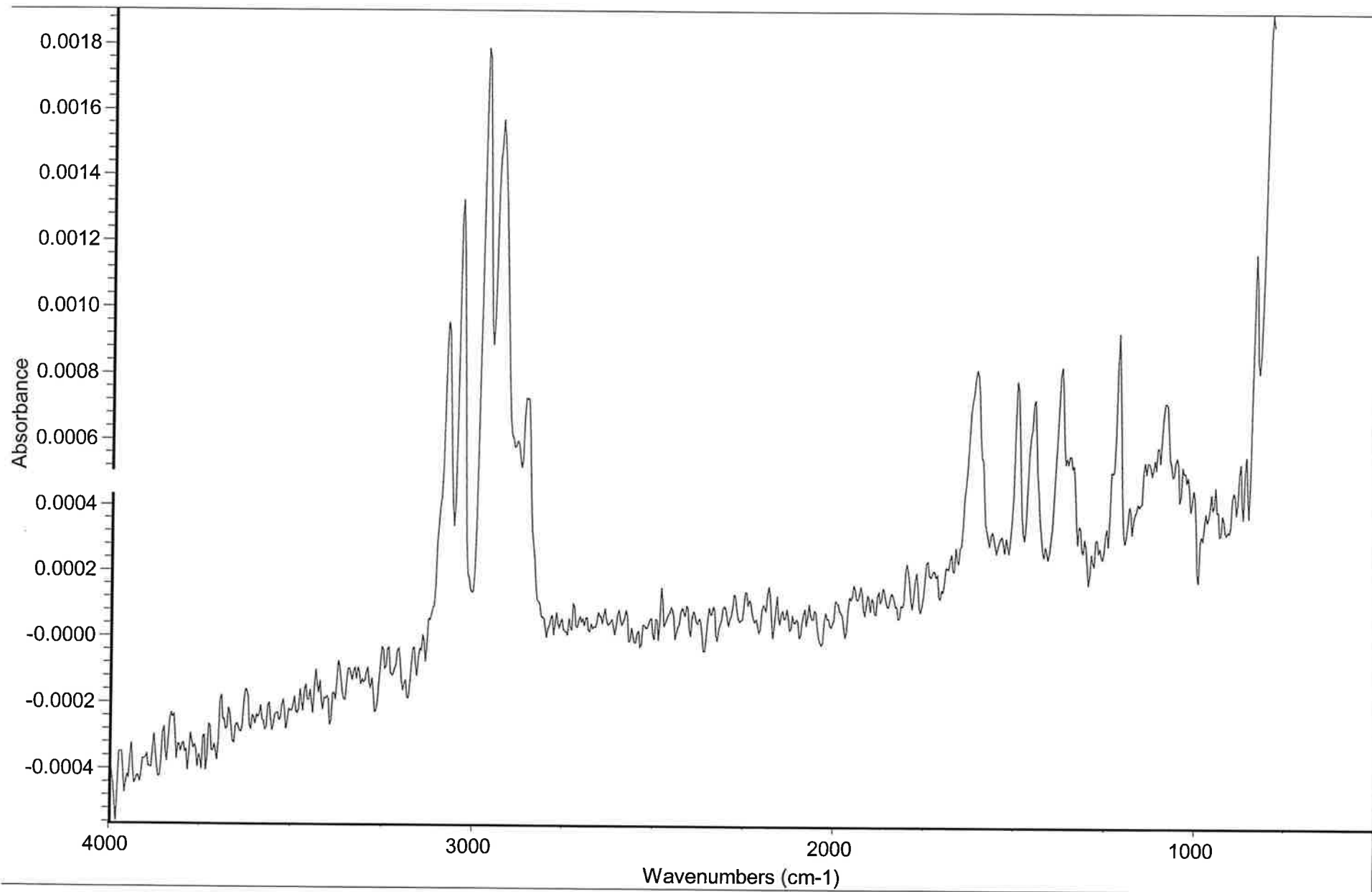


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.002 min.

Scans: 4

Resolution: 8.000



Linked spectrum at 2.463 min. AMPHETAMINE TEST WHS

IR #1

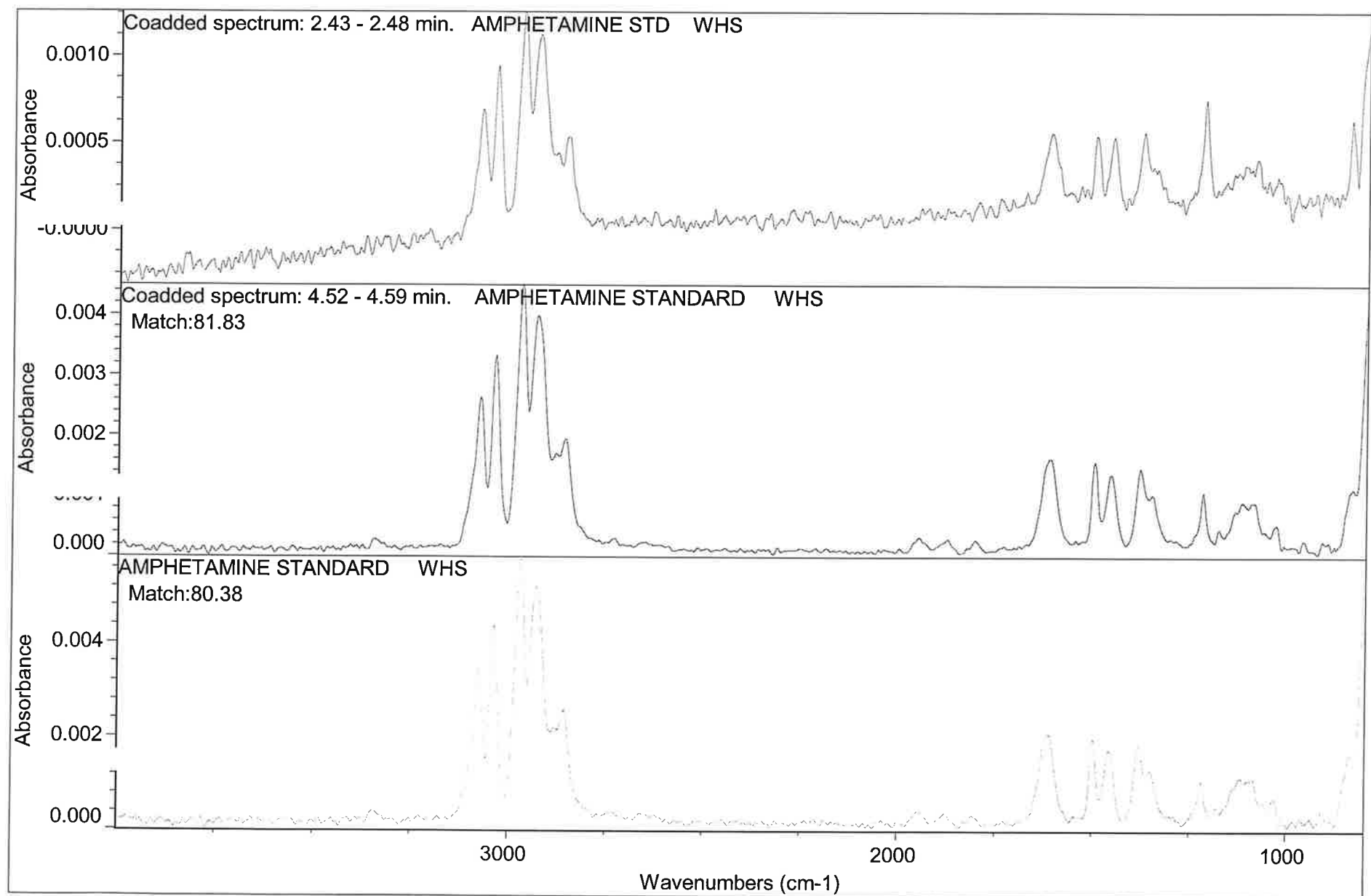
Collection time: Thu Jul 12 13:29:07 2001

Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS

Date: Thu Jul 12 14:20:11 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS

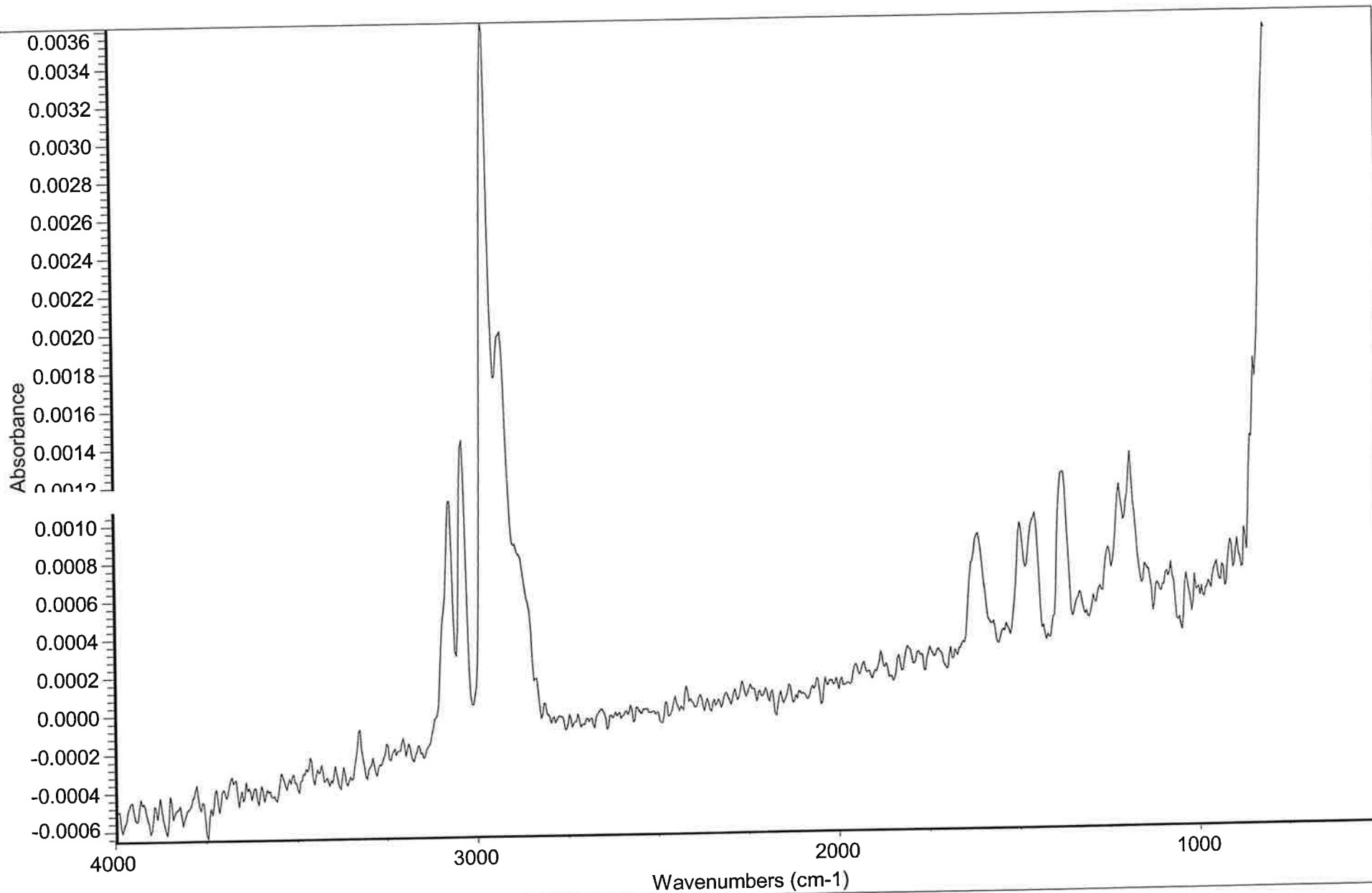
Date: Thu Jul 12 14:20:11 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40

Search results list of matches

Index		Match	Compound Name	Library Name	
1	2	81.83	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
2	1	80.38	AMPHETAMINE STANDARD WHS		TEST
3	6	70.99	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
4	5	70.72	PHENTERMINE STANDARD WHS		TEST
5	3	56.86	METHAMPHETAMINE STANDARD	WHS	TEST



Linked spectrum at 2.750 min. PHENTERMINE STD WHS

IR #1

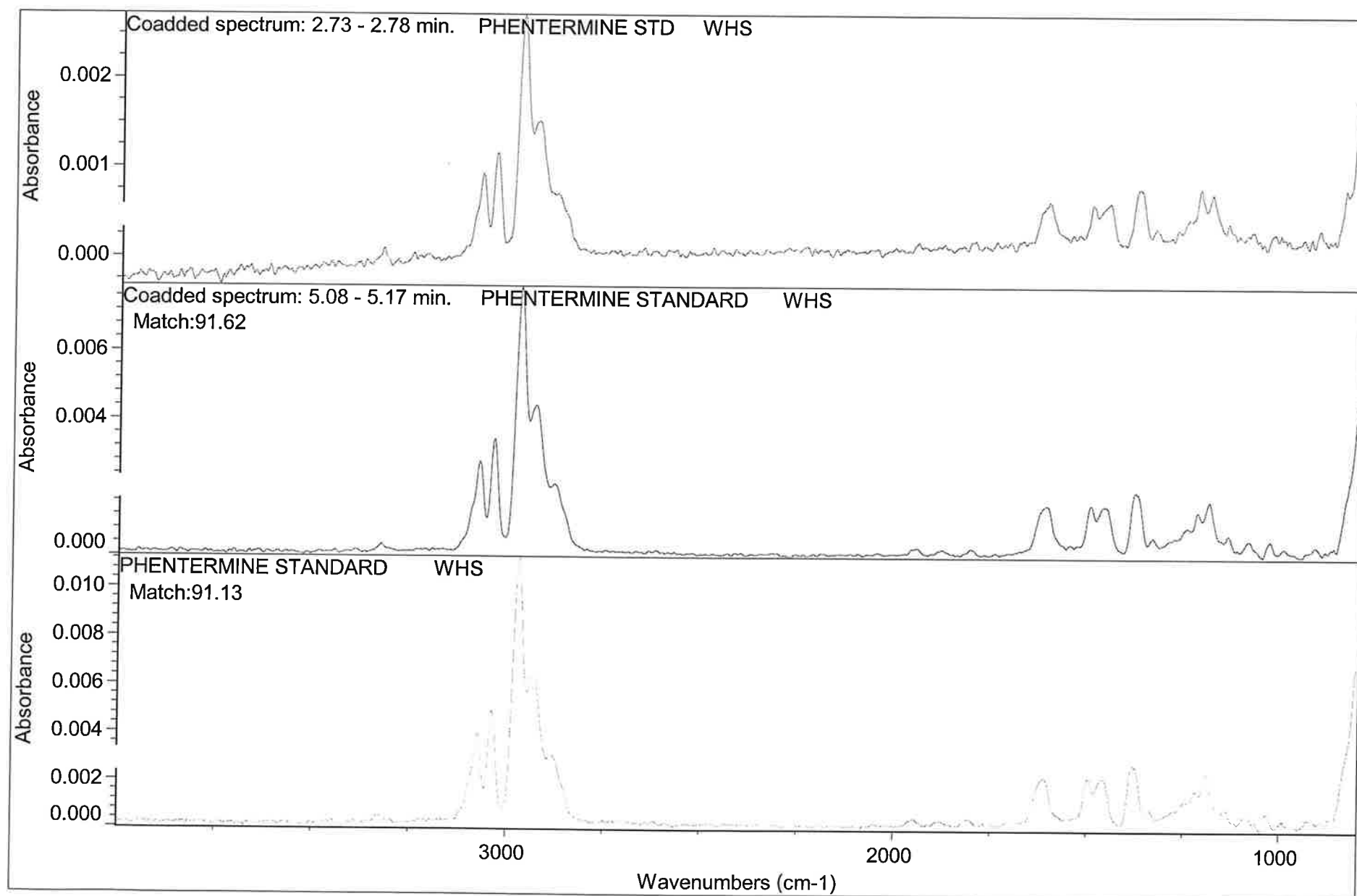
Collection time: Thu Jul 12 13:29:25 2001

Search results for: Coadded spectrum: 2.73 - 2.78 min. PHENTERMINE STD WHS

Date: Thu Jul 12 14:21:31 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.73 - 2.78 min. PHENTERMINE STD WHS

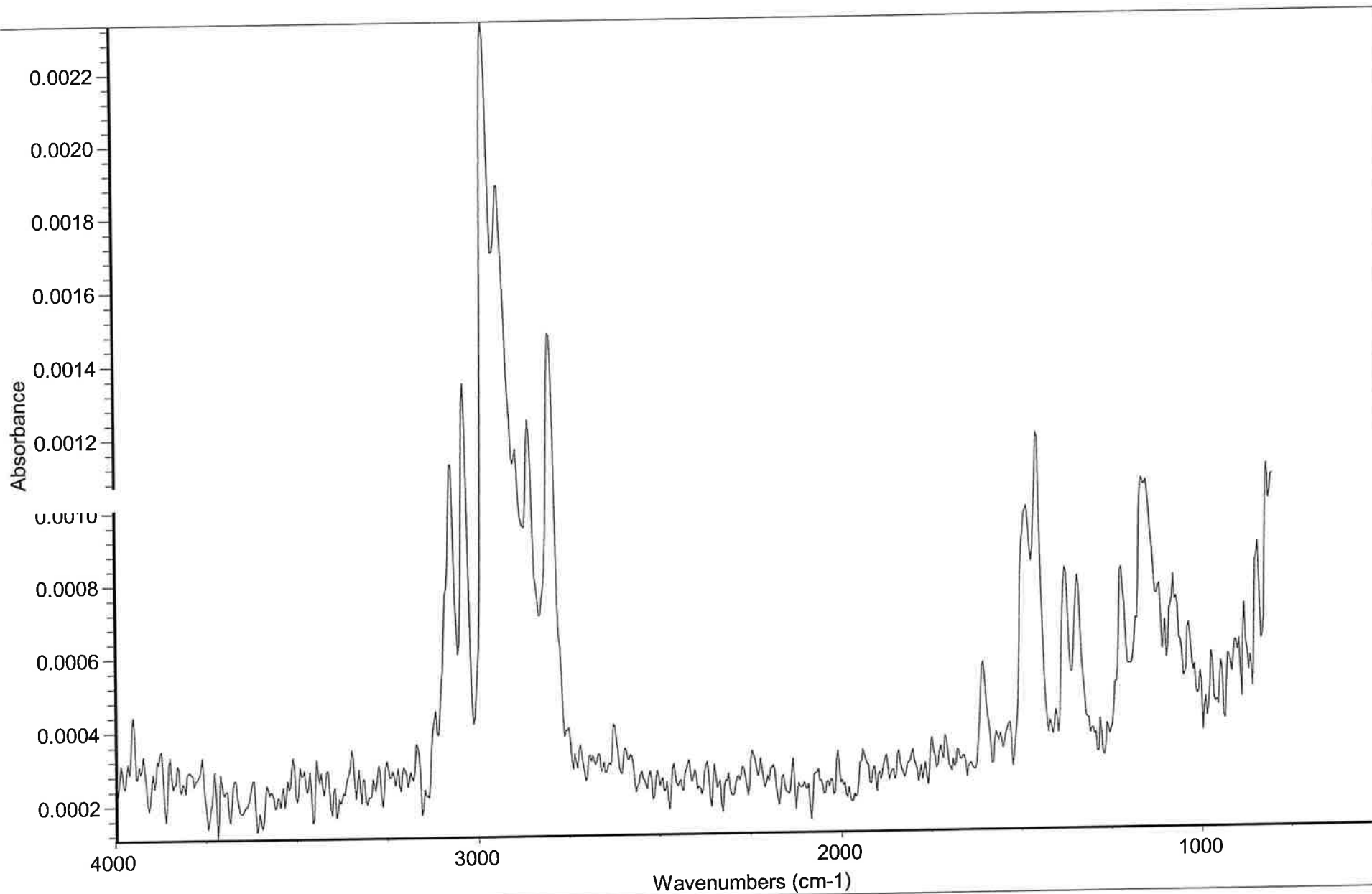
Date: Thu Jul 12 14:21:31 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name		Library Name
1	6	91.62	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
2	5	91.13	PHENTERMINE STANDARD WHS		TEST
3	2	79.57	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
4	1	78.99	AMPHETAMINE STANDARD WHS		TEST
5	4	75.29	TERT-BUTYLBENZENE, 99%		Aldrich Vapor Phase Sample Library

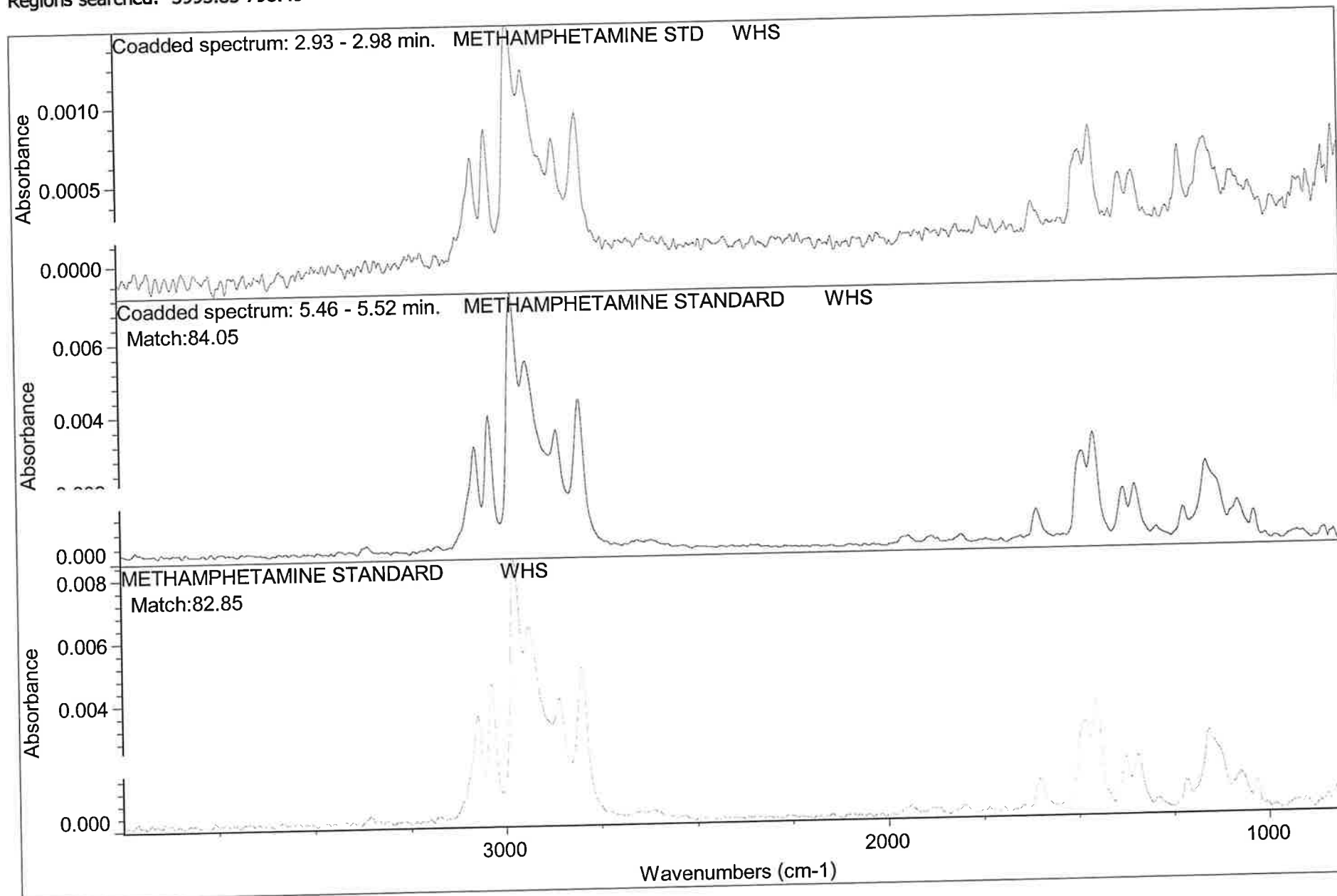


Linked spectrum at 2.962 min. METHAMPHETAMINE STD WHS

IR #1

Collection time: Thu Jul 12 13:29:37 2001

Search results for: Coadded spectrum: 2.93 - 2.98 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 14:22:43 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.93 - 2.98 min. METHAMPHETAMINE STD WHS

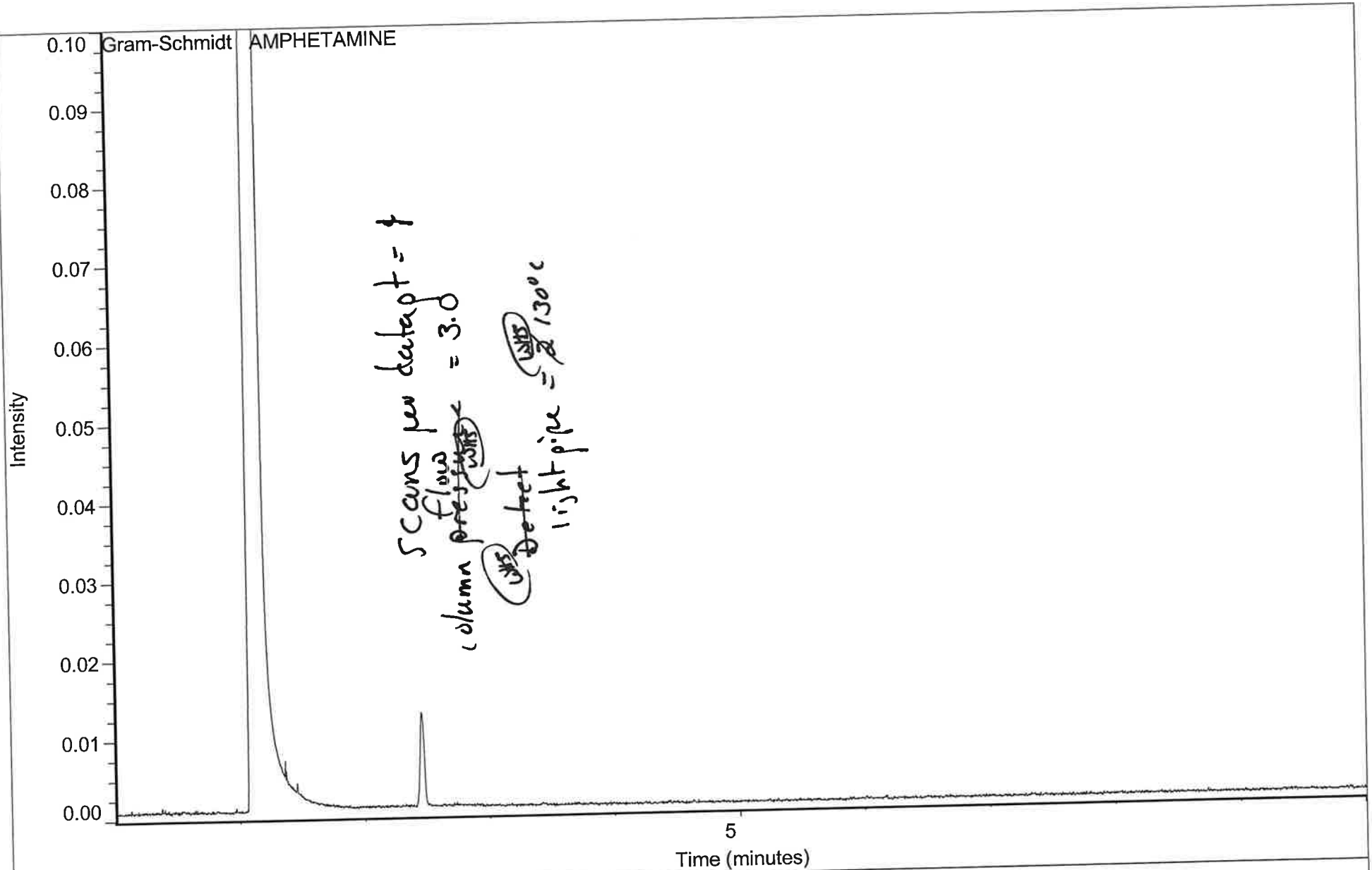
Date: Thu Jul 12 14:22:43 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	84.05	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	82.85	METHAMPHETAMINE STANDARD WHS	TEST
3	6	60.82	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	59.85	PHENTERMINE STANDARD WHS	TEST
5	2	58.97	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST

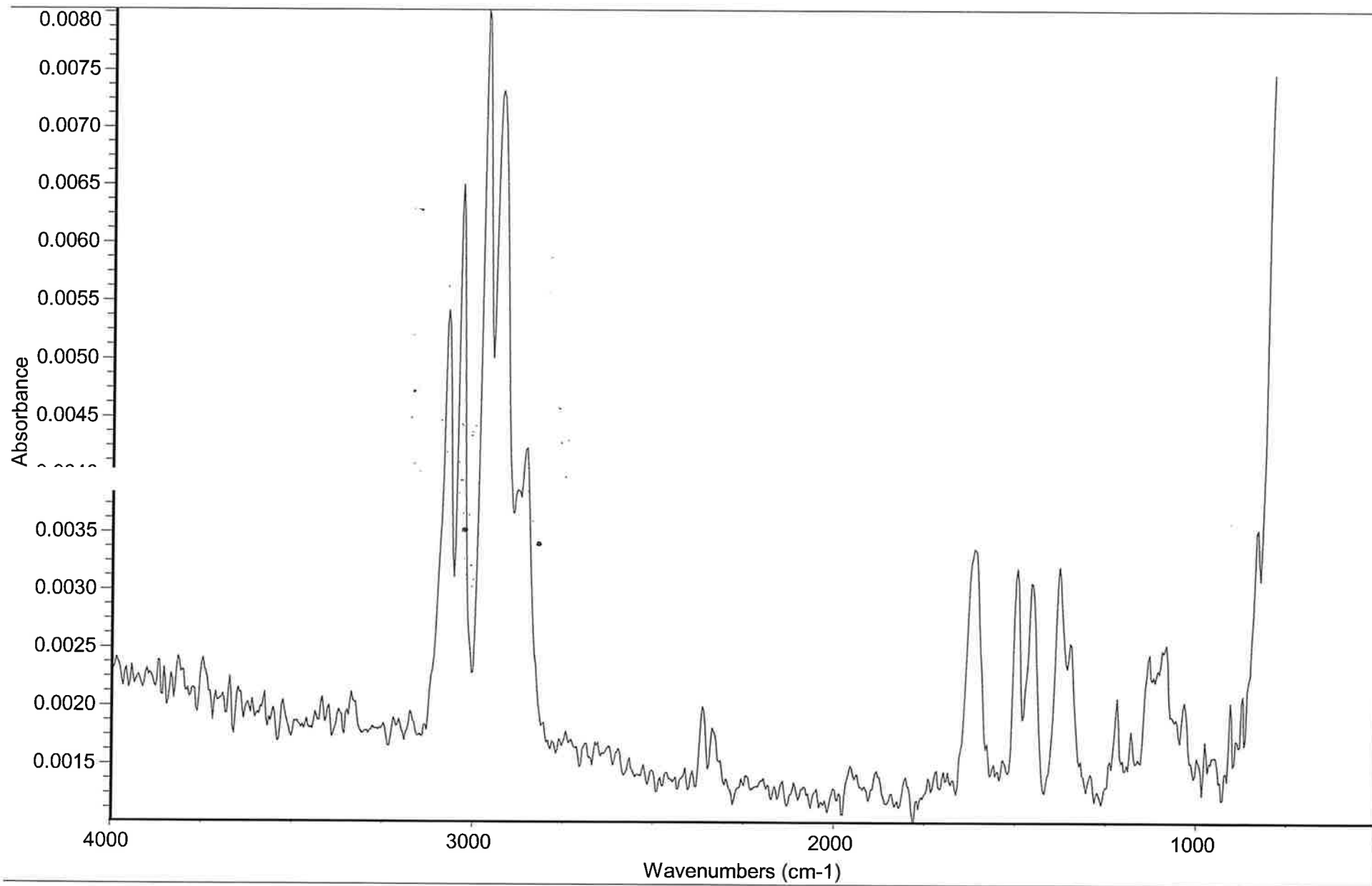


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.003 min.

Scans: 1

Resolution: 8.000



Linked spectrum at 2.454 min. AMPHETAMINE STD. WHS

IR #1

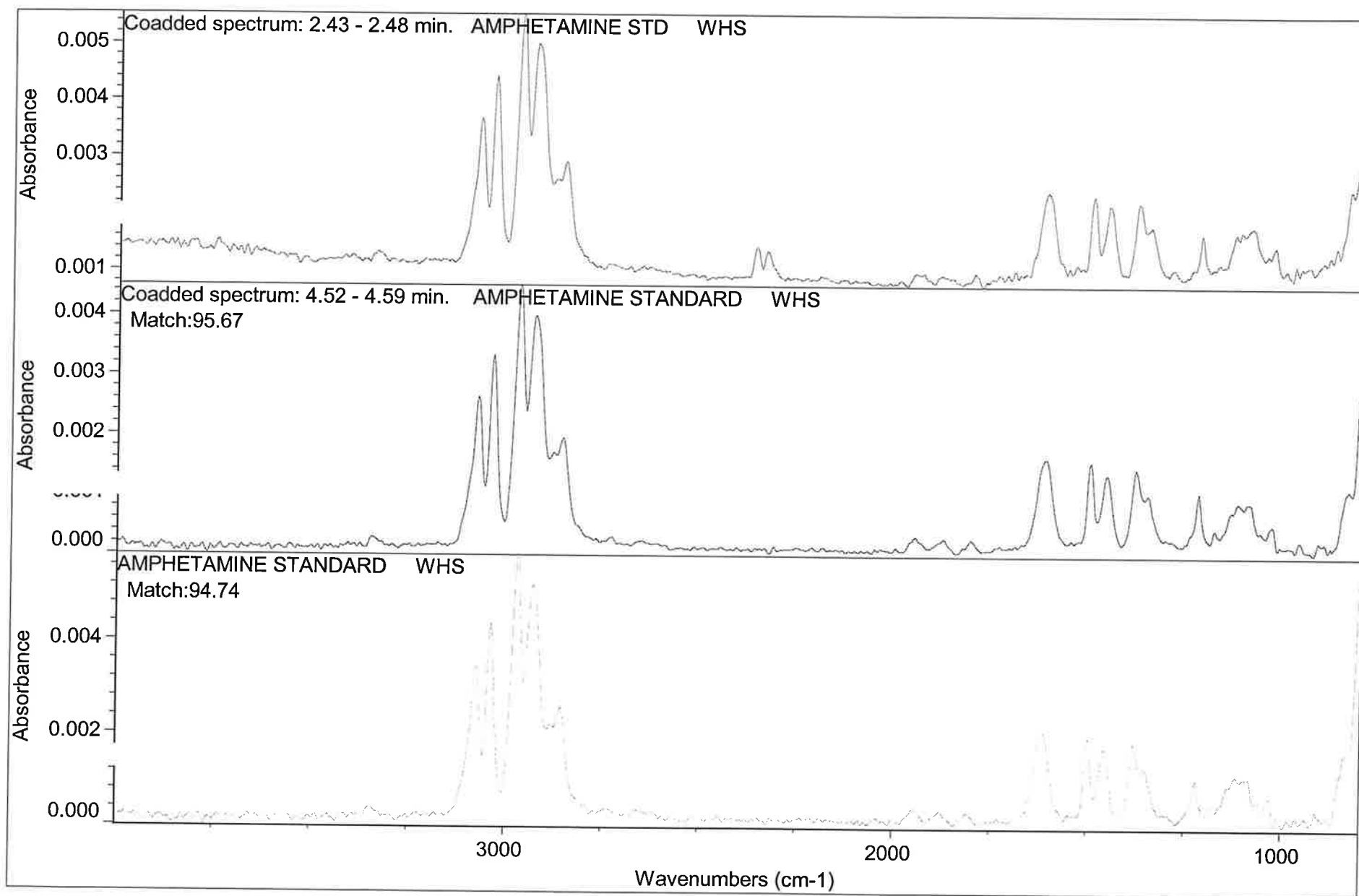
Collection time: Thu Jul 12 14:34:21 2001

Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS

Date: Thu Jul 12 15:33:46 2001

Search algorithm: Correlation

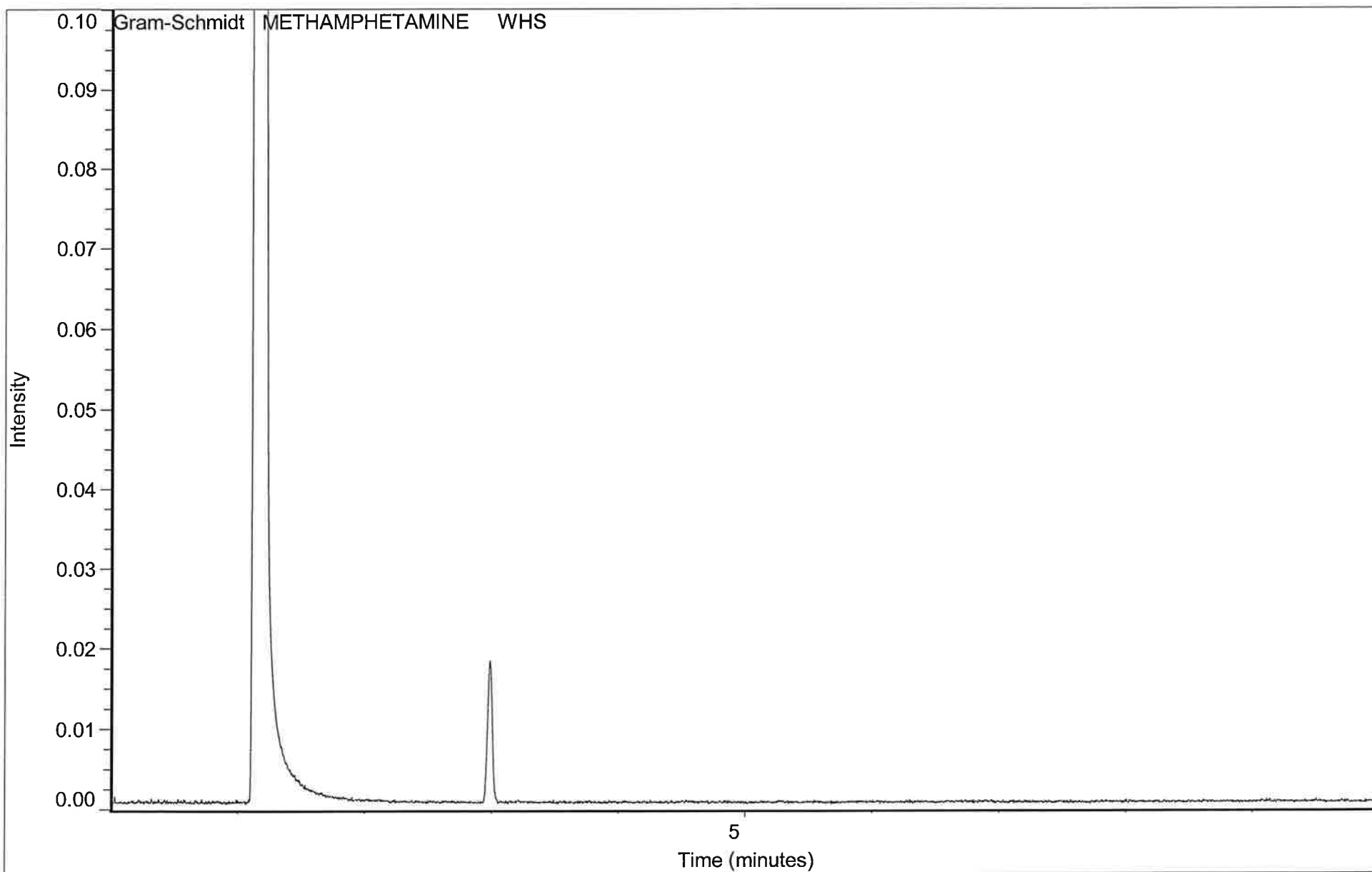
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.43 - 2.48 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 15:33:46 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	2	95.67	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	94.74	AMPHETAMINE STANDARD WHS	TEST
3	6	84.40	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	84.16	PHENTERMINE STANDARD WHS	TEST
5	3	65.94	METHAMPHETAMINE STANDARD WHS	TEST

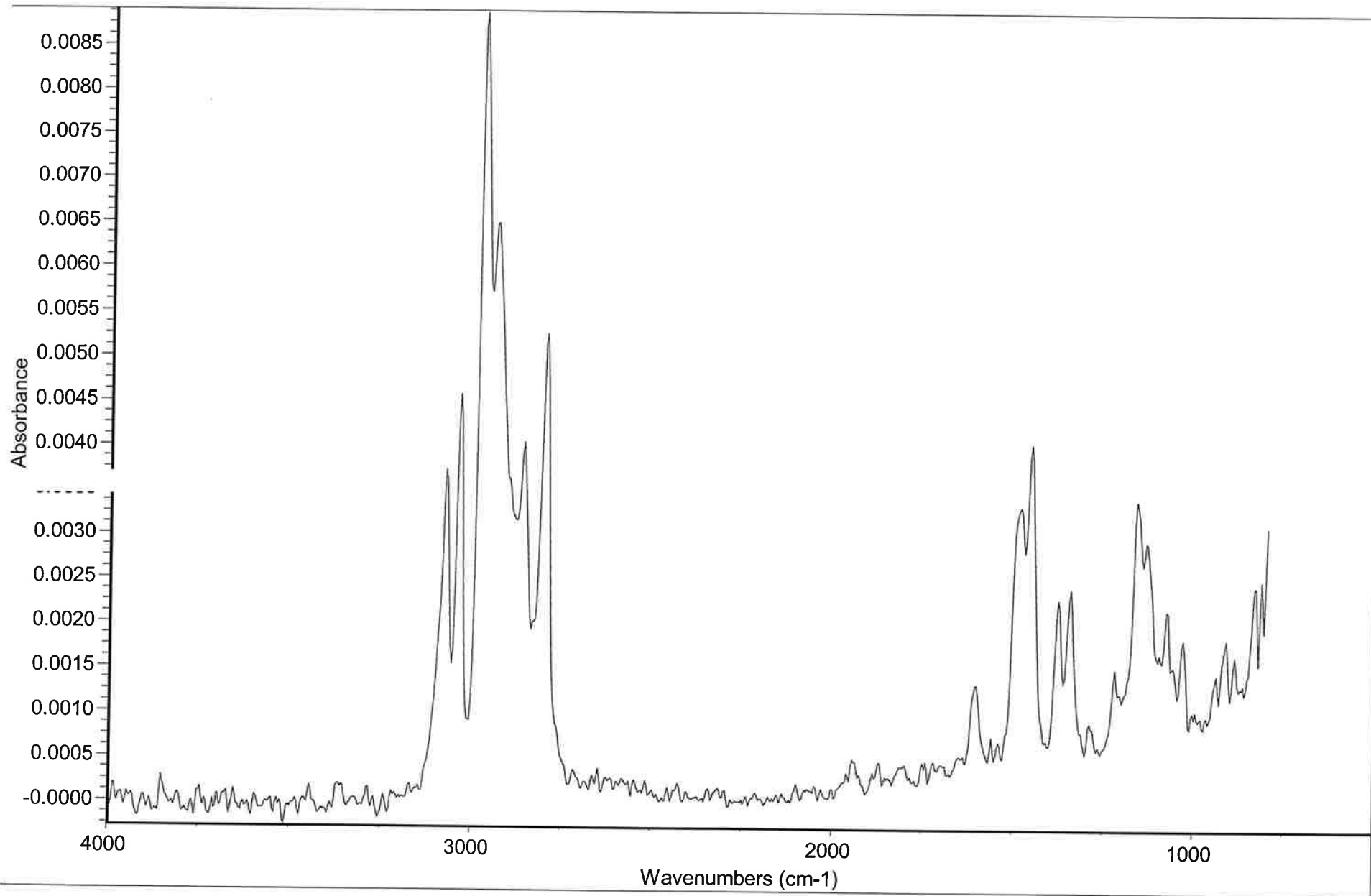


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.001 min.

Scans: 1

Resolution: 8.000

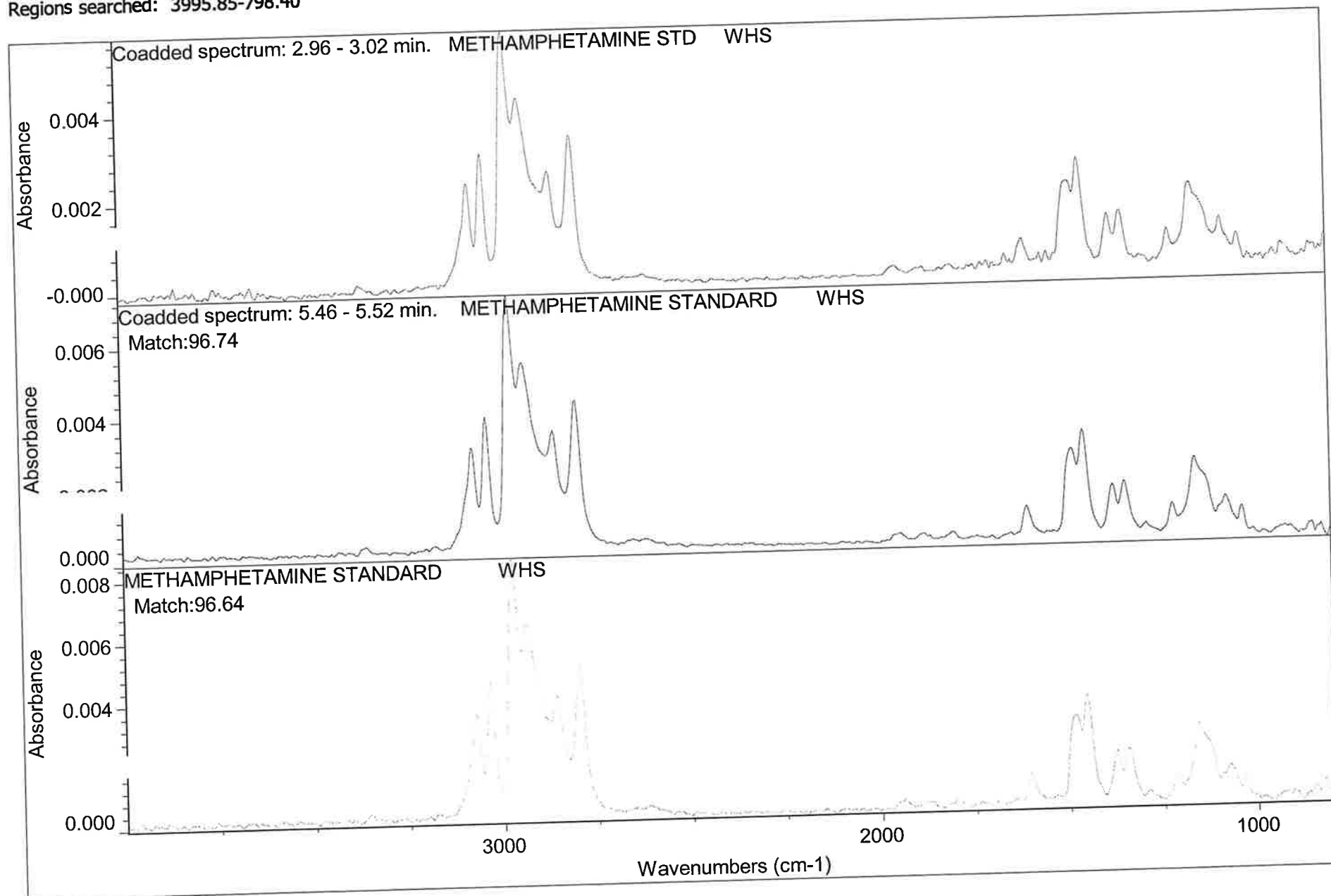


Linked spectrum at 2.987 min. METHAMPHETAMINE STD WHS

IR #1

Collection time: Thu Jul 12 14:45:43 2001

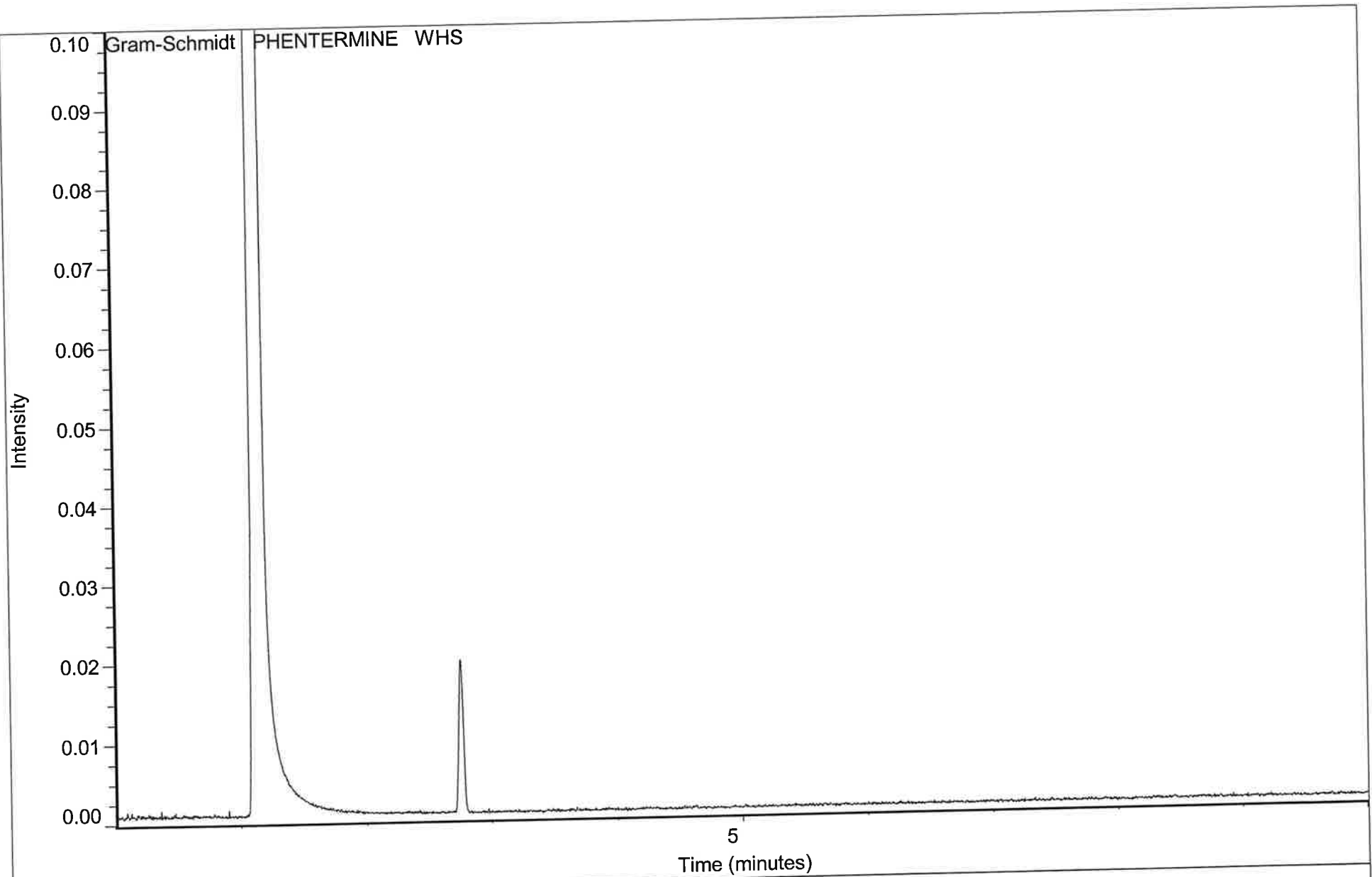
Search results for: Coadded spectrum: 2.96 - 3.02 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 15:35:00 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.96 - 3.02 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 15:35:00 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	96.74	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	96.64	METHAMPHETAMINE STANDARD WHS	TEST
3	6	70.05	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	69.61	PHENTERMINE STANDARD WHS	TEST
5	2	66.64	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST

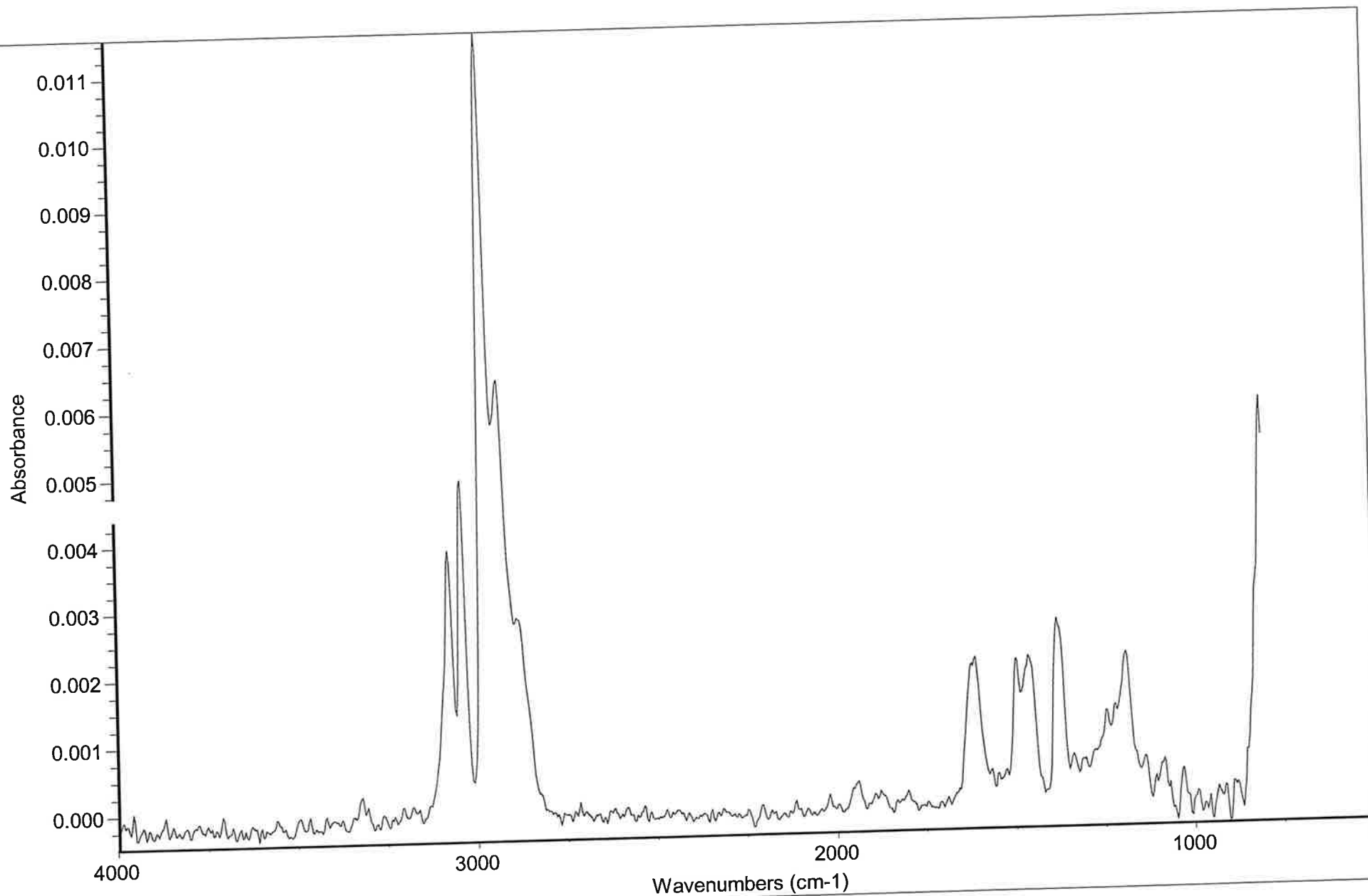


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.003 min.

Scans: 1

Resolution: 8.000

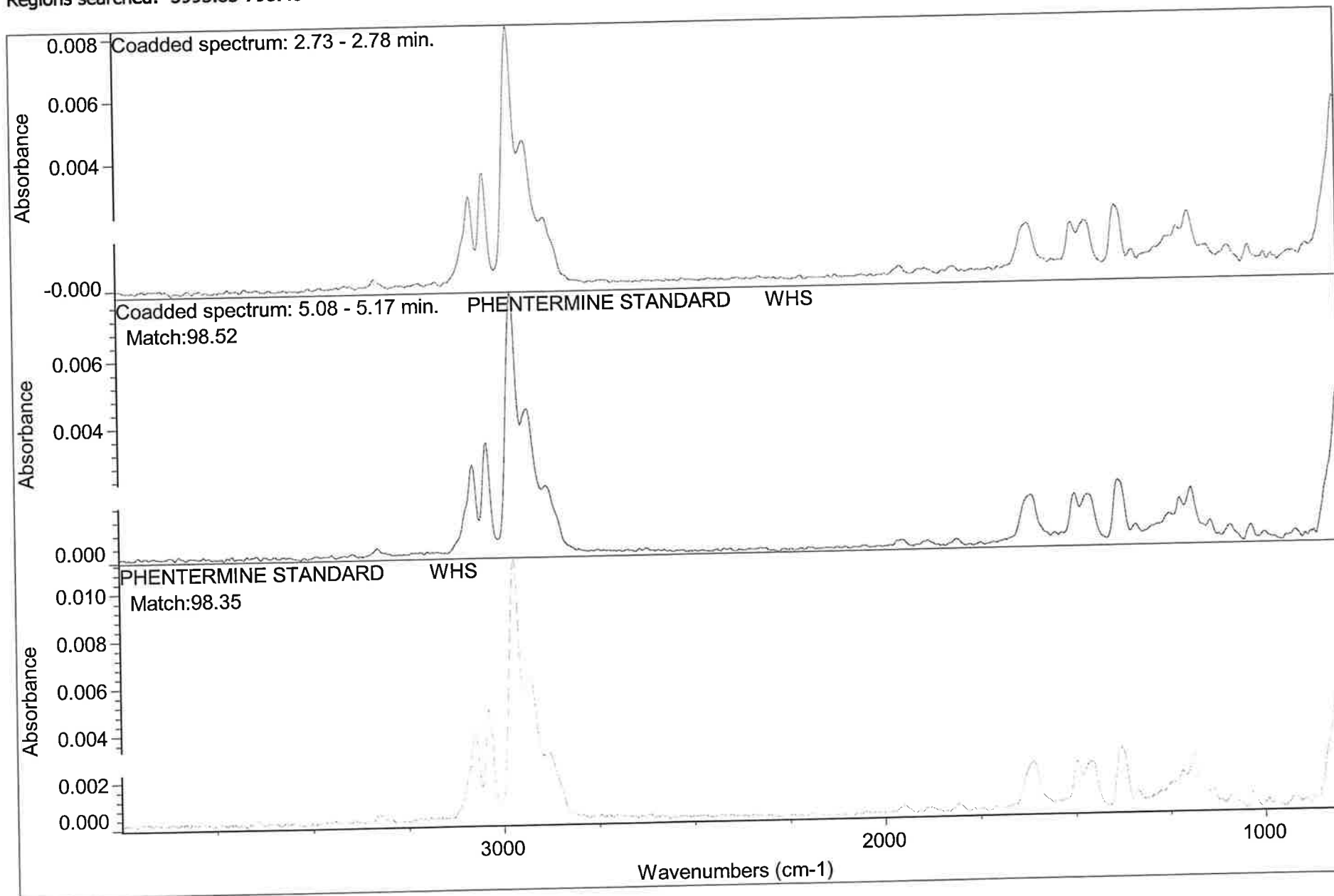


Linked spectrum at 2.759 min. PHENTERMINE STD WHS

IR #1

Collection time: Thu Jul 12 14:56:21 2001

Search results for: Coadded spectrum: 2.73 - 2.78 min.
Date: Thu Jul 12 15:36:36 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.73 - 2.78 min.

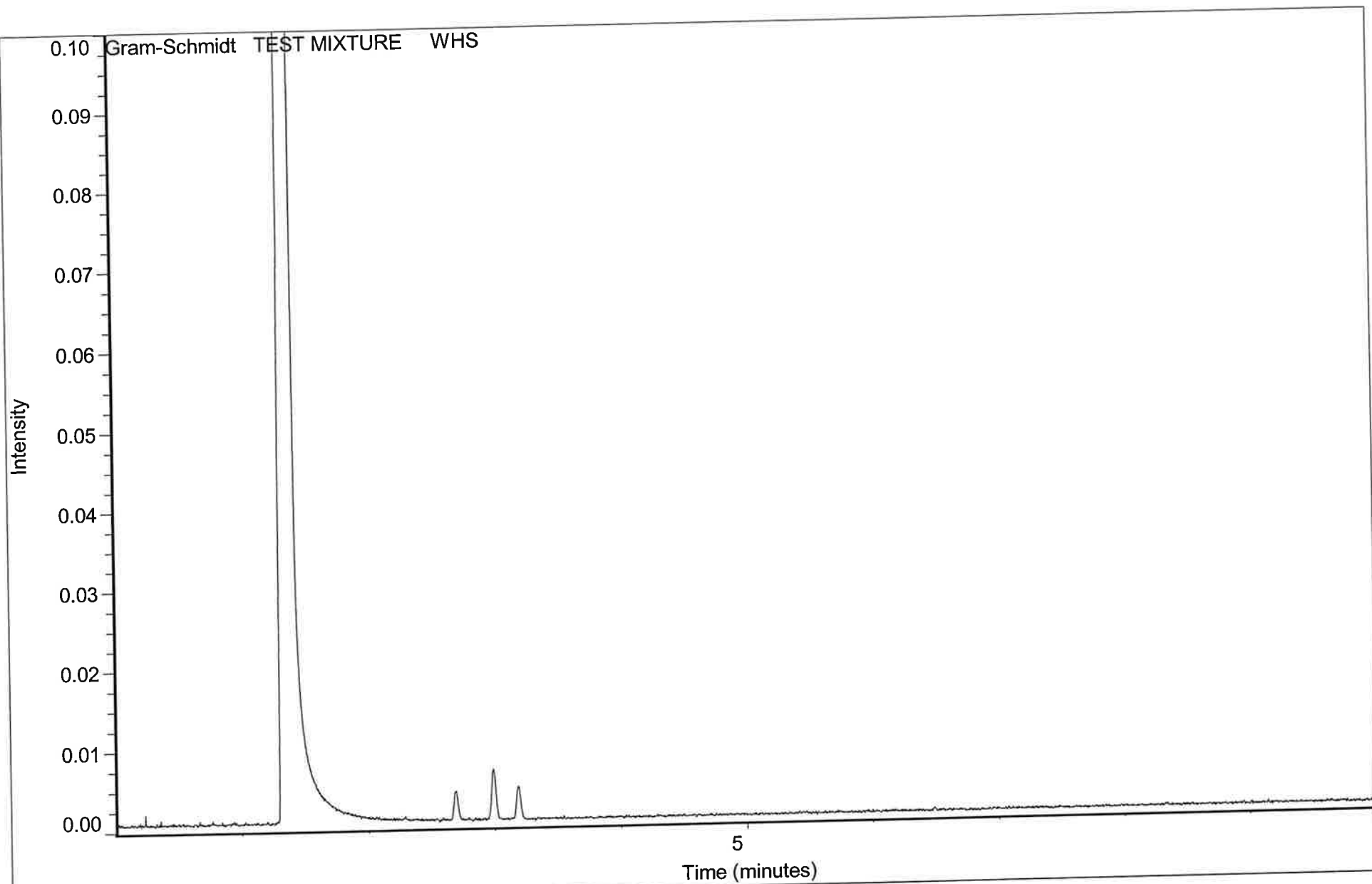
Date: Thu Jul 12 15:36:36 2001

Search algorithm: Correlation

Regions searched: 3995.85-798.40

Search results list of matches

Index		Match	Compound Name	Library Name
1	6	98.52	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	98.35	PHENTERMINE STANDARD WHS	TEST
3	2	83.91	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	83.69	AMPHETAMINE STANDARD WHS	TEST
5	4	78.38	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library

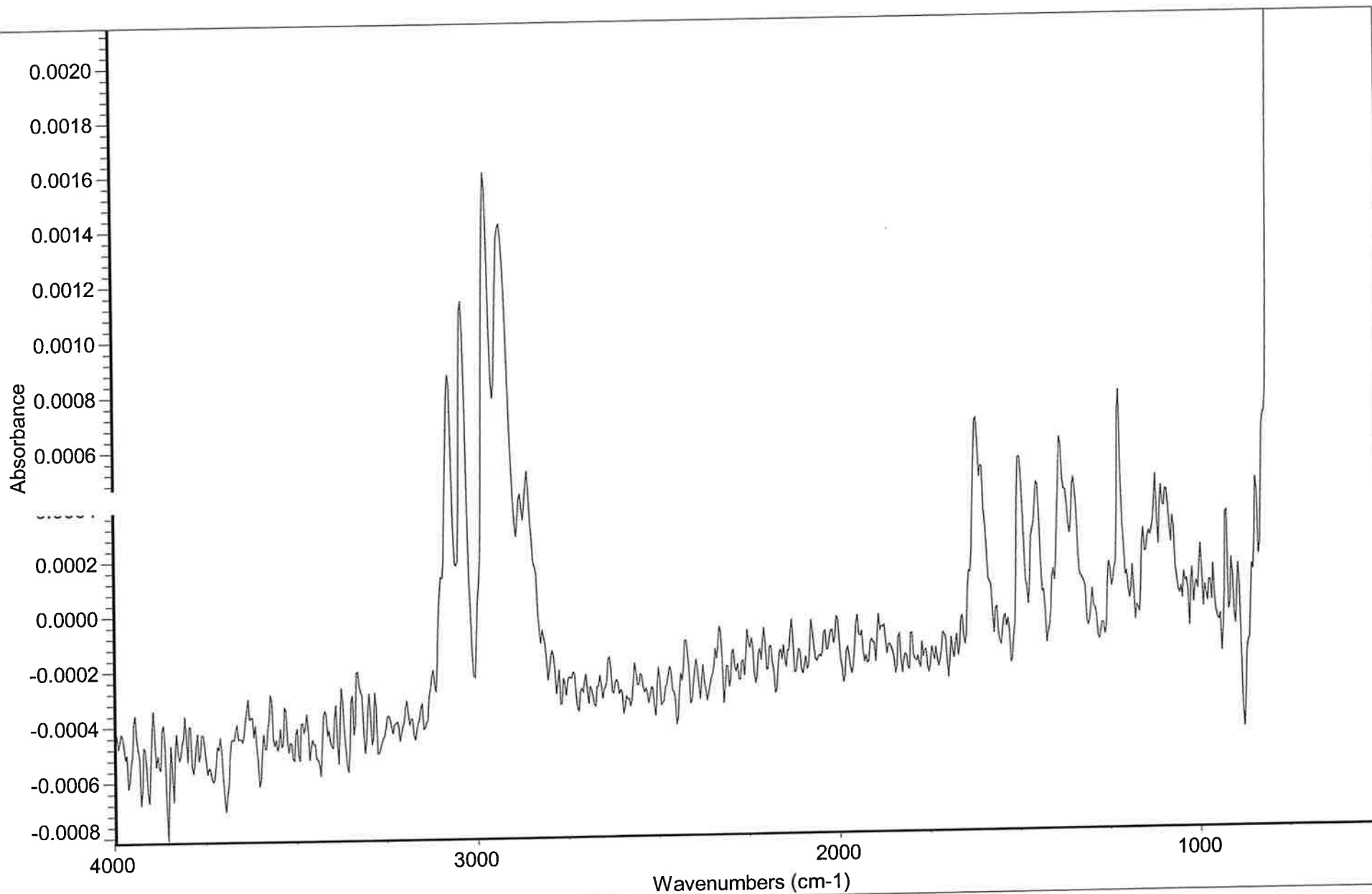


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.001 min.

Scans: 1

Resolution: 8.000

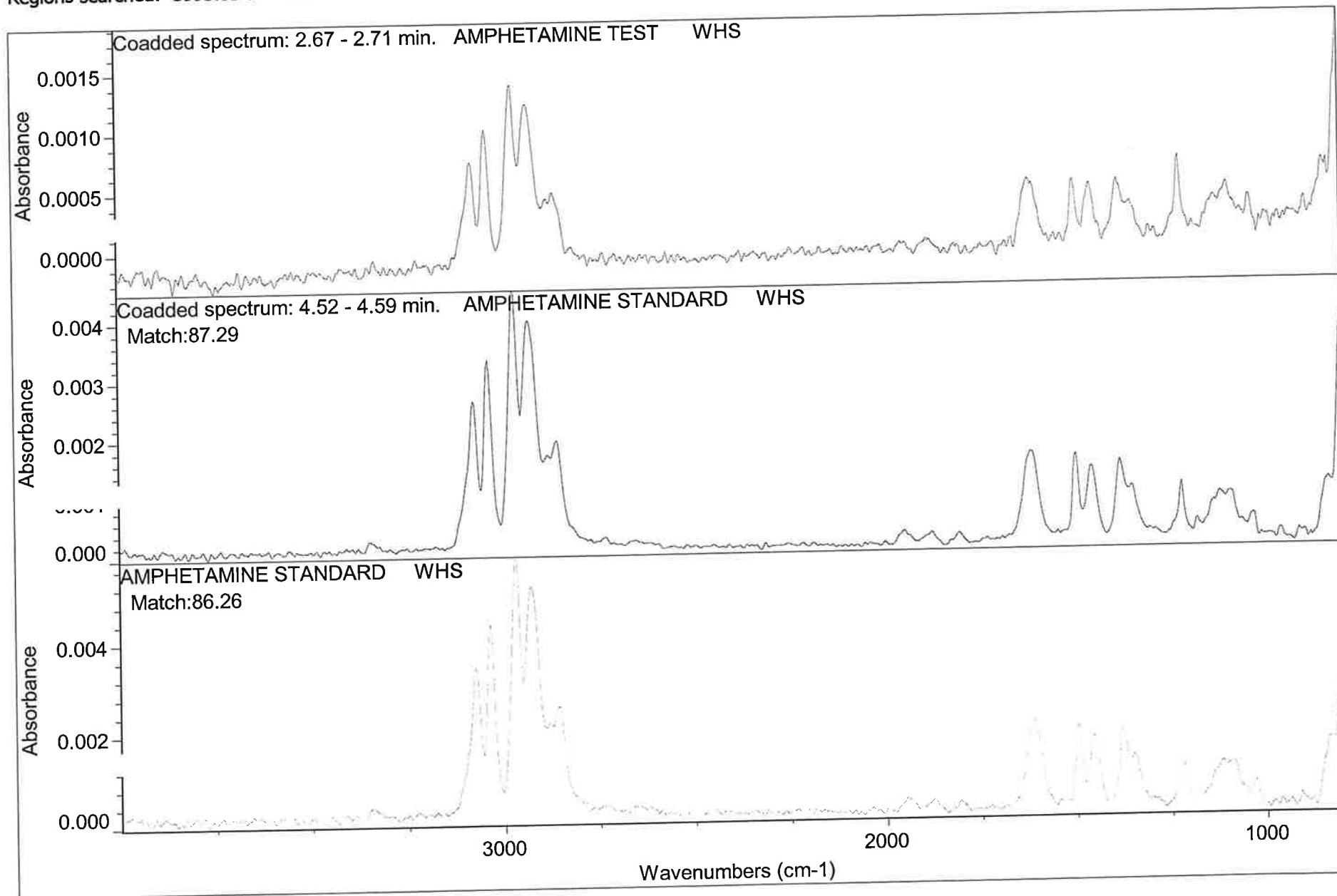


Linked spectrum at 2.691 min. AMPHETAMINE TEST WHS

IR #1

Collection time: Thu Jul 12 15:06:51 2001

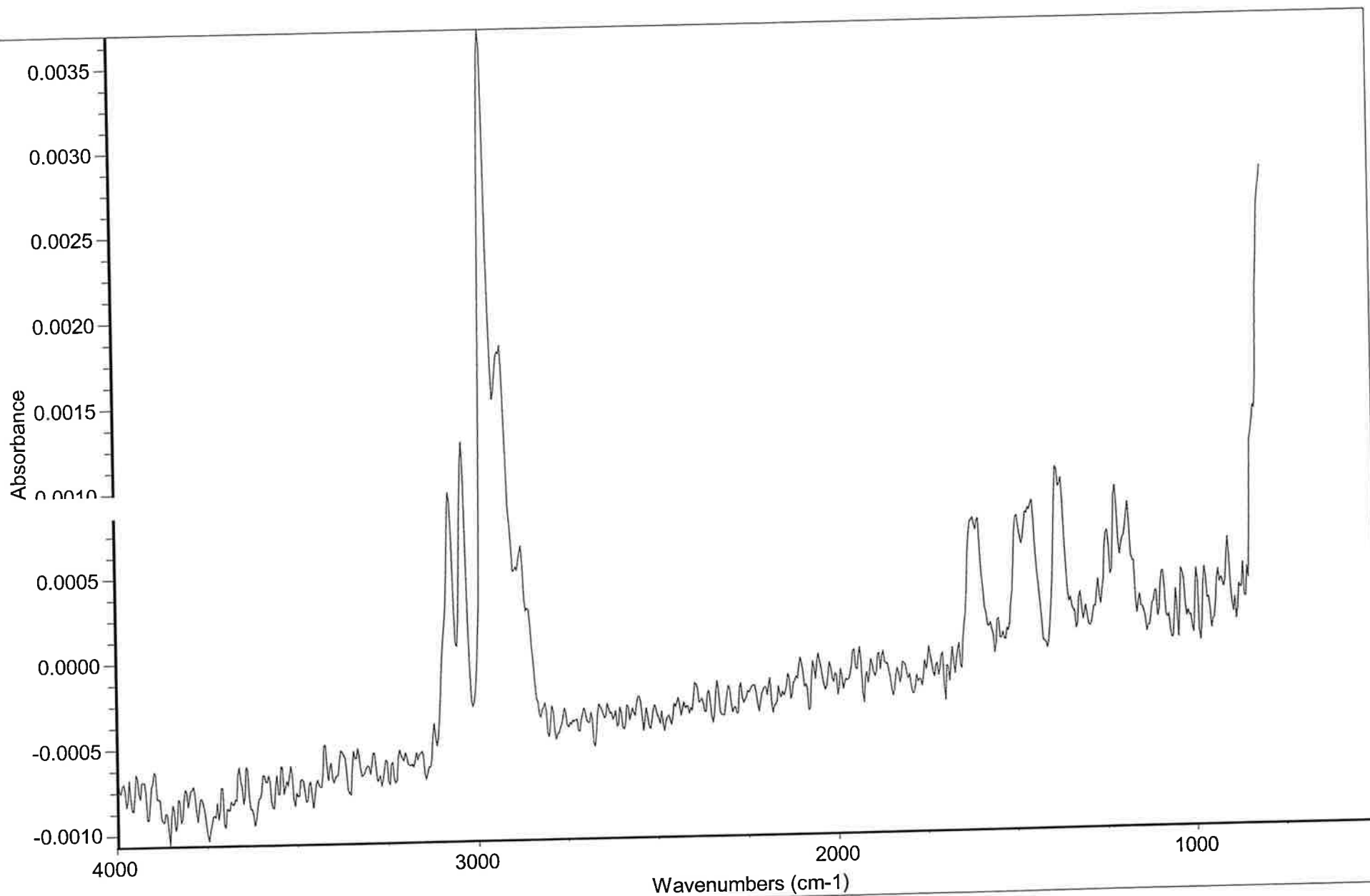
Search results for: Coadded spectrum: 2.67 - 2.71 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 15:37:47 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 2.67 - 2.71 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 15:37:47 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	2	87.29	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	86.26	AMPHETAMINE STANDARD WHS	TEST
3	6	75.04	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	74.56	PHENTERMINE STANDARD WHS	TEST
5	4	58.34	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST

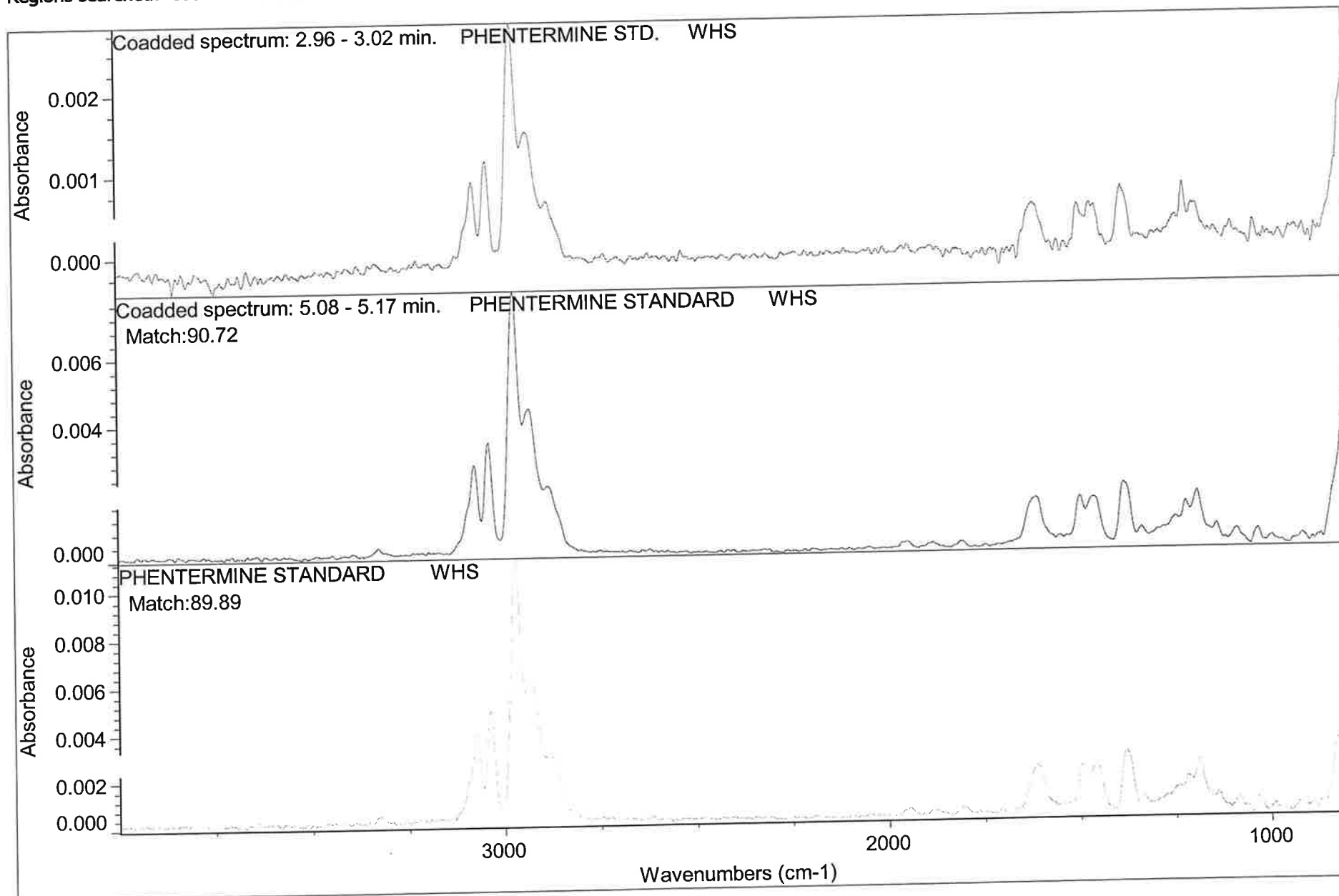


Linked spectrum at 2.989 min. PHENTERMINE STD WHS

IR #1

Collection time: Thu Jul 12 15:07:09 2001

Search results for: Coadded spectrum: 2.96 - 3.02 min. PHENTERMINE STD. WHS
Date: Thu Jul 12 15:38:43 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



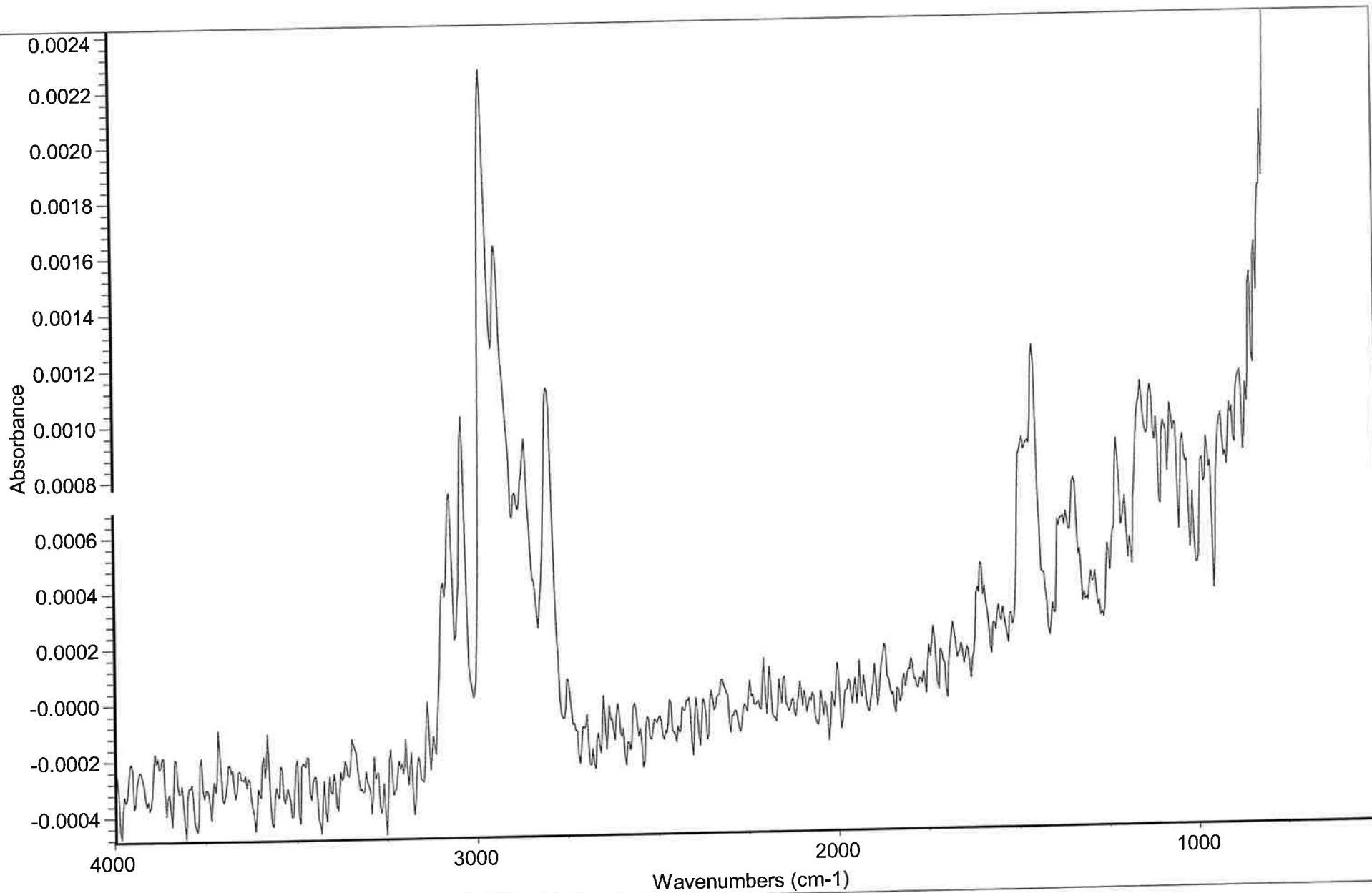
Search results for: Coadded spectrum: 2.96 - 3.02 min. PHENTERMINE STD. WHS
Date: Thu Jul 12 15:38:43 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name
1	6	90.72	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD
2	5	89.89	PHENTERMINE STANDARD WHS
3	2	80.84	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD
4	1	80.37	AMPHETAMINE STANDARD WHS
5	4	76.31	TERT-BUTYLBENZENE, 99%

Library Name

TEST
TEST
TEST
TEST
Aldrich Vapor Phase Sample Library



Linked spectrum at 3.186 min. METHAMPHETAMINE TEST

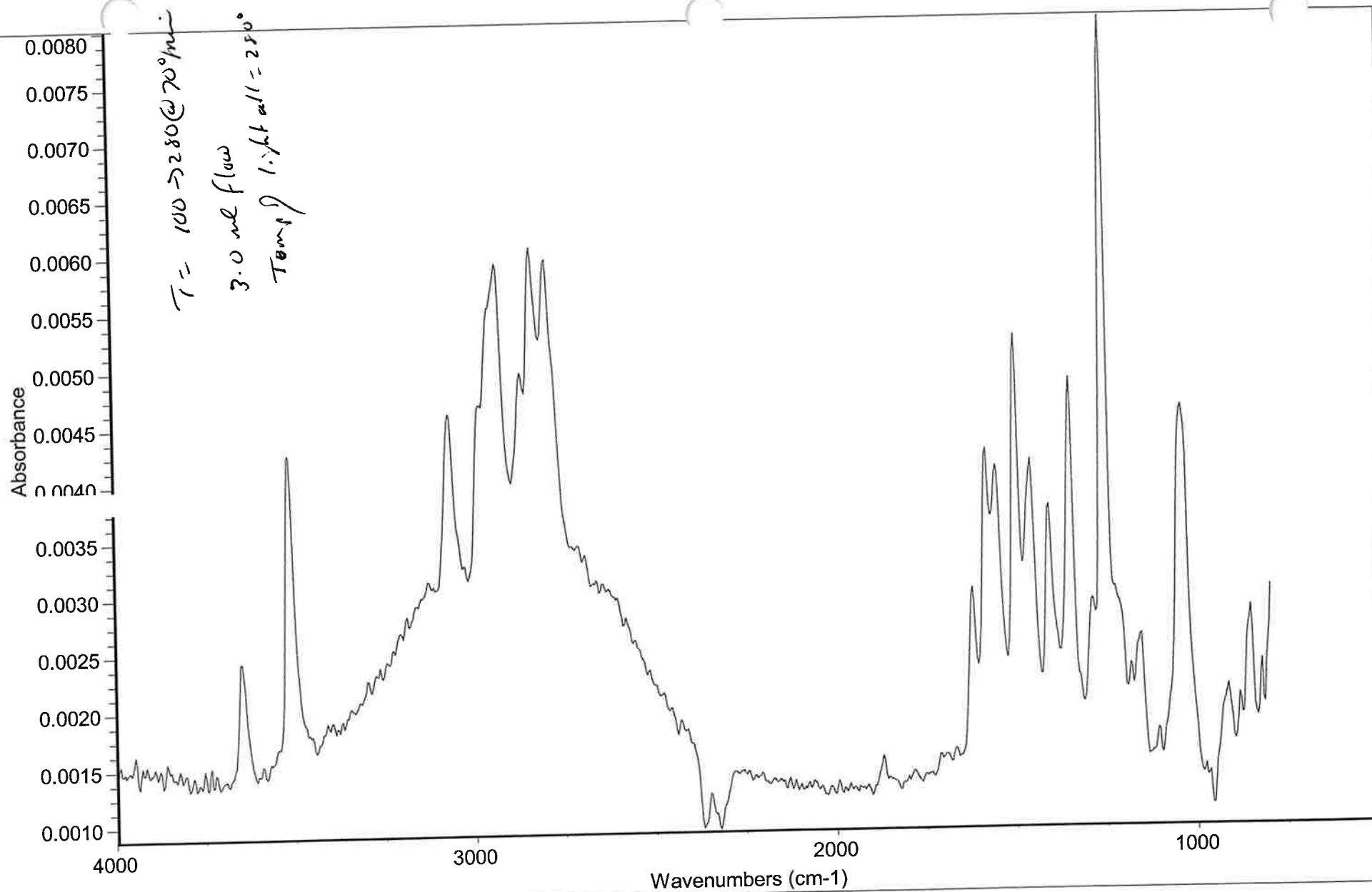
IR #1

Collection time: Thu Jul 12 15:07:21 2001

Search results for: Coadded spectrum: 3.16 - 3.21 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 15:39:38 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	86.87	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	85.59	METHAMPHETAMINE STANDARD WHS	TEST
3	6	62.80	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	78	62.16	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
5	5	62.11	PHENTERMINE STANDARD WHS	TEST

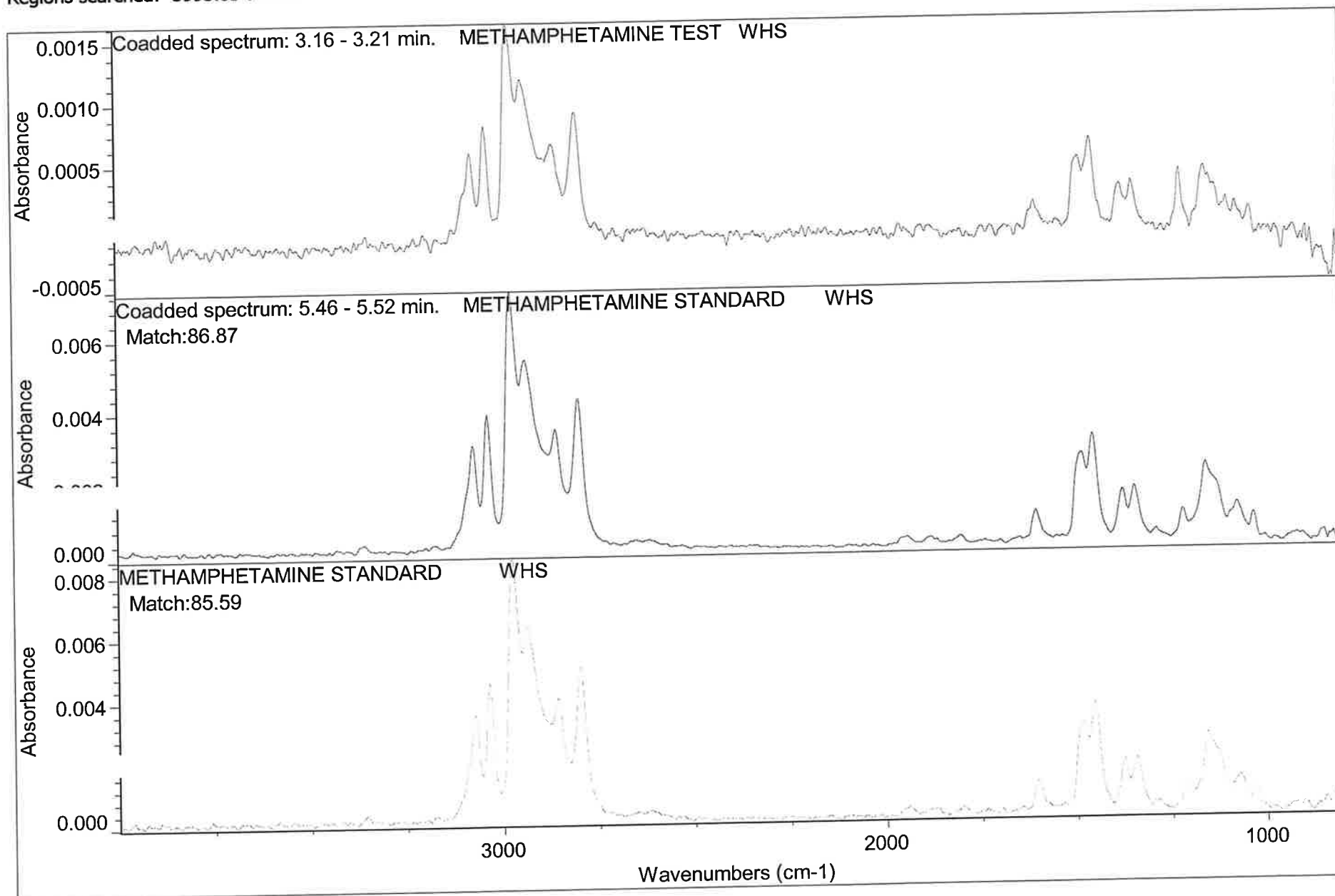


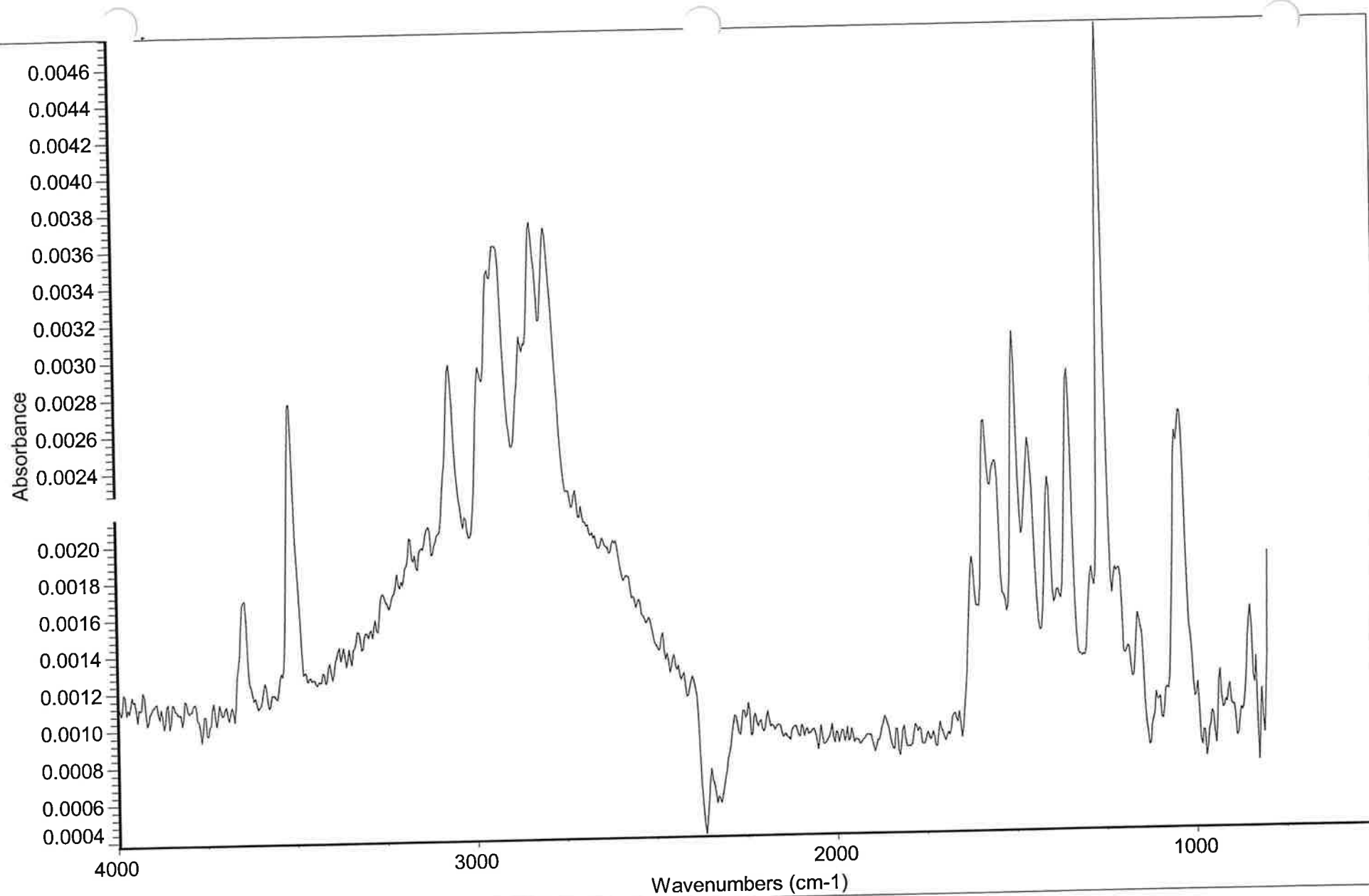
Coadded spectrum: 5.16 - 5.19 min. PSILOCYN

IR #1

Collection time: Fri Jul 13 16:38:46 2001

Search results for: Coadded spectrum: 3.16 - 3.21 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 15:39:38 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

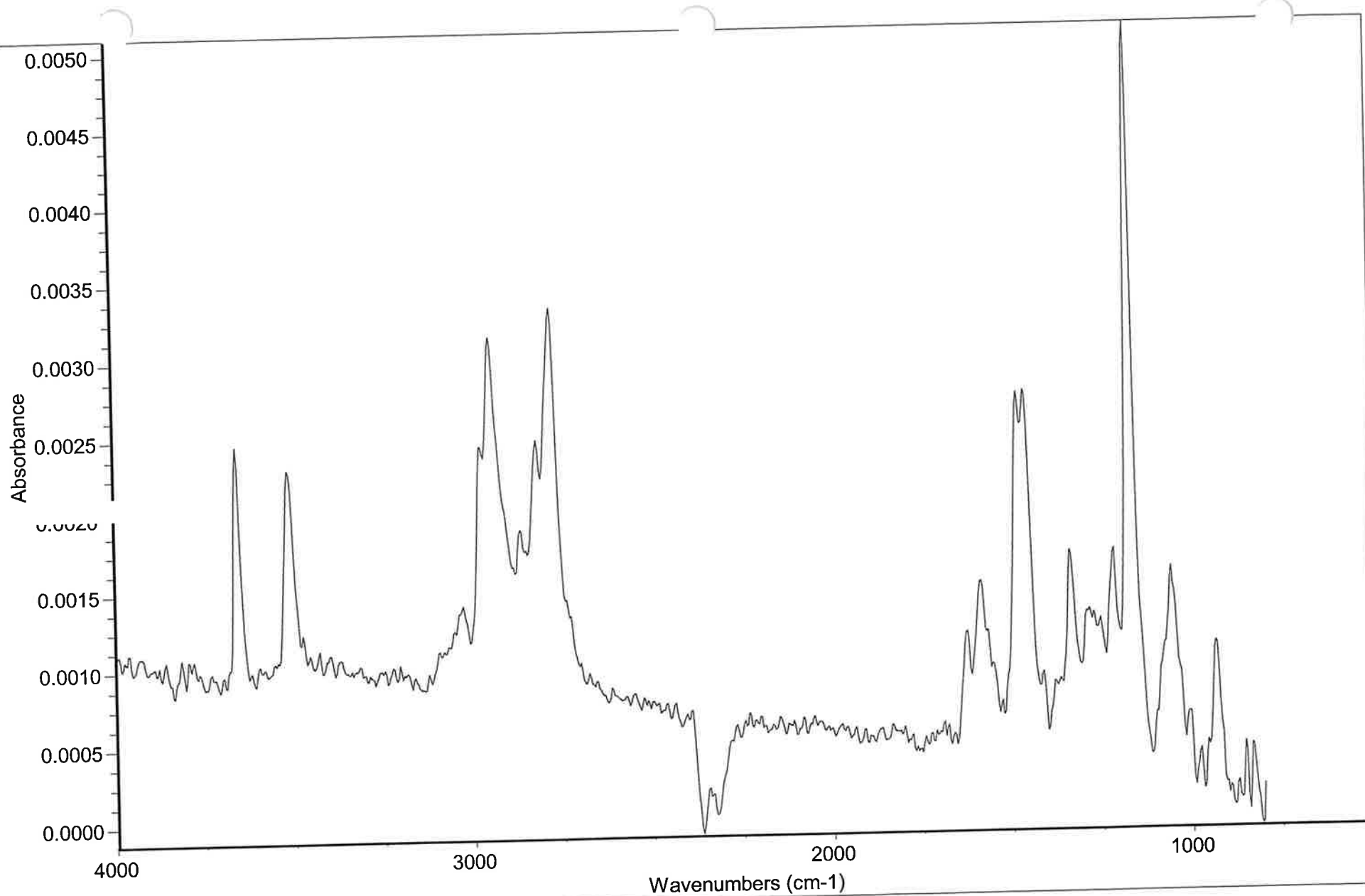




Coadded spectrum: 3.73 - 3.77 min. PSILOCYBIN WHS

IR #1

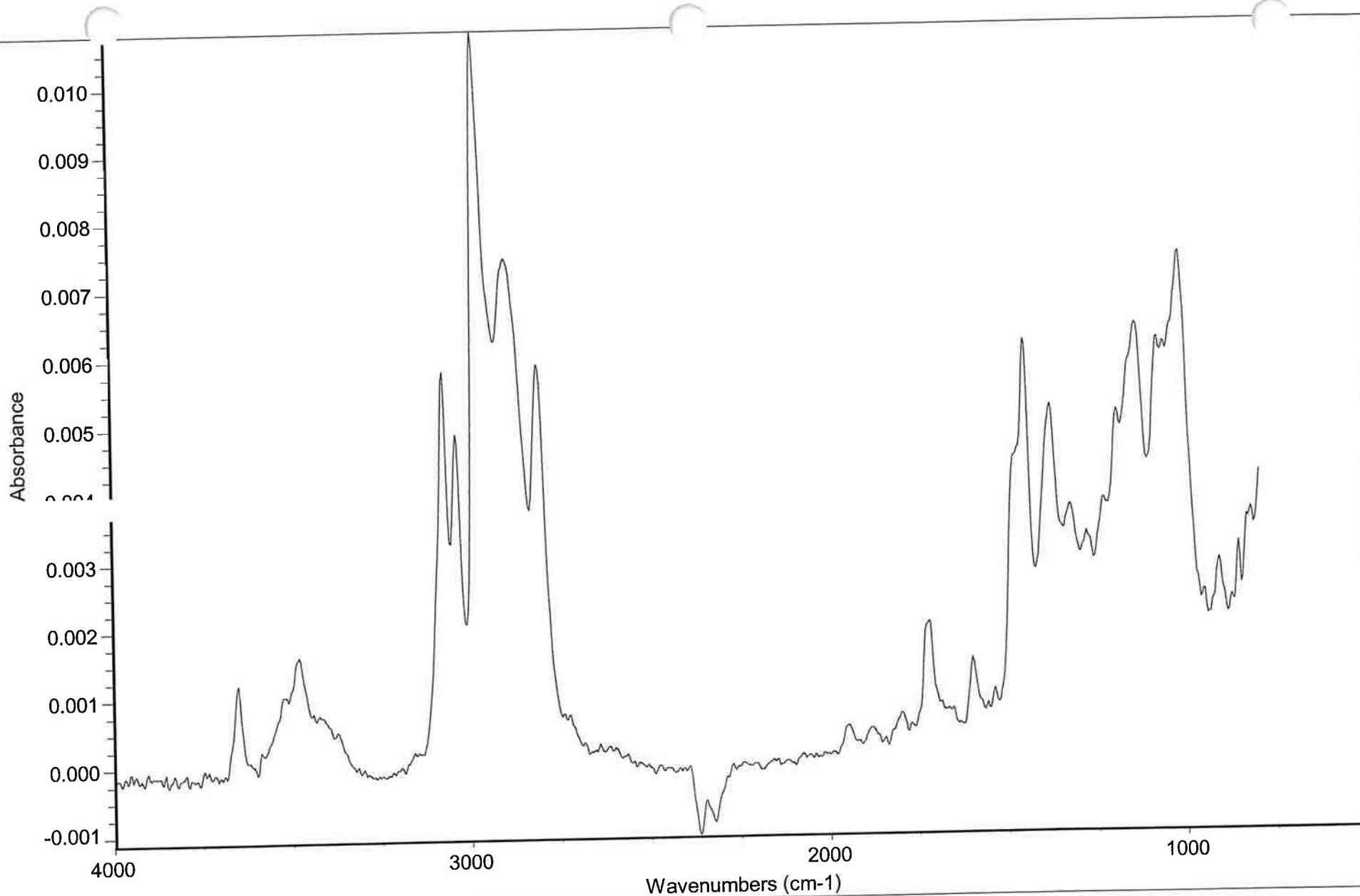
Collection time: Fri Jul 13 16:47:08 2001



Coadded spectrum: 6.02 - 6.08 min. BUFOTENINE

IR #1

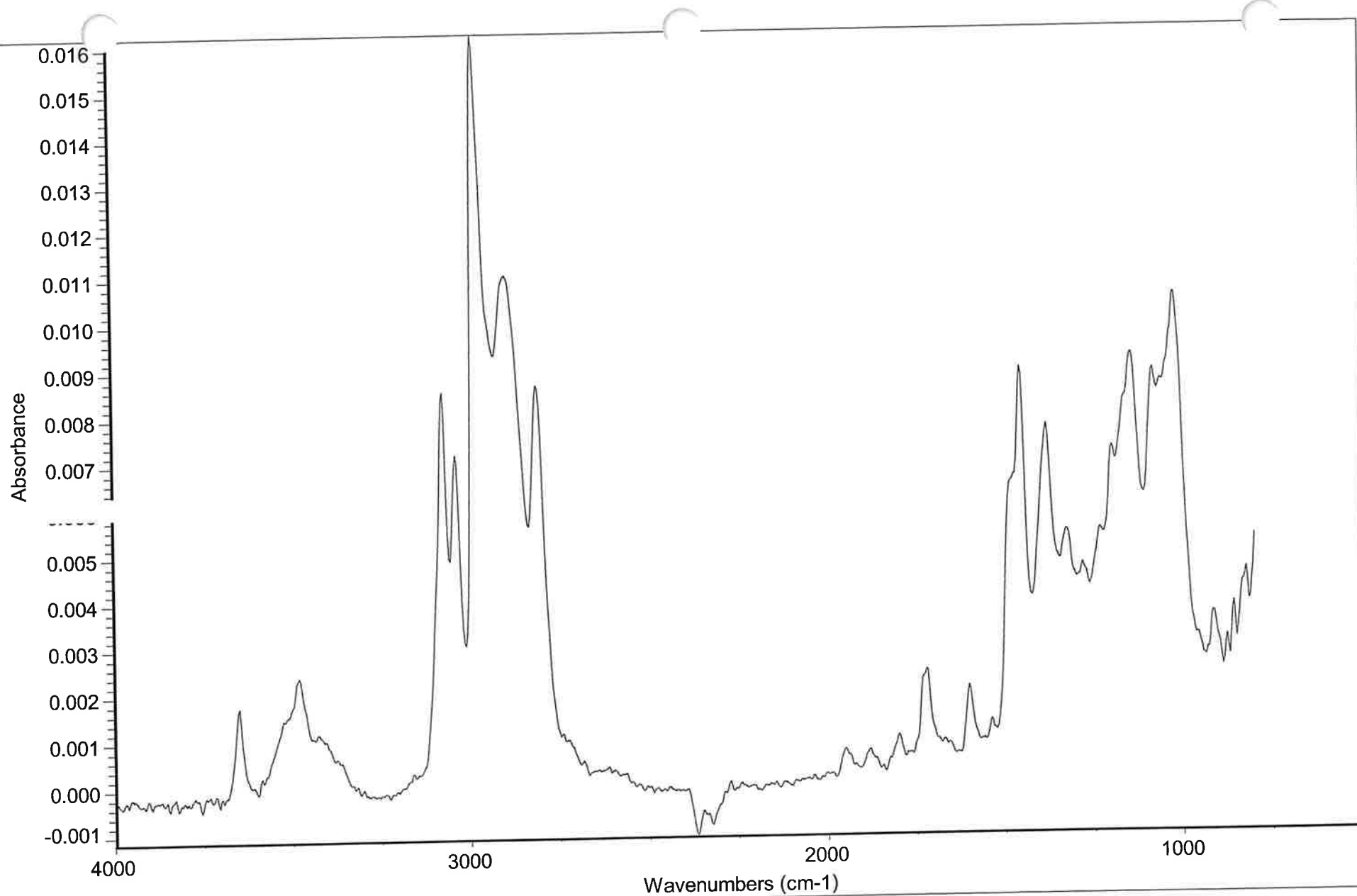
Collection time: Fri Jul 13 17:17:14 2001



Coadded spectrum: 2.12 - 2.15 min. PSEUDOEPHERINE WHS

IR #1

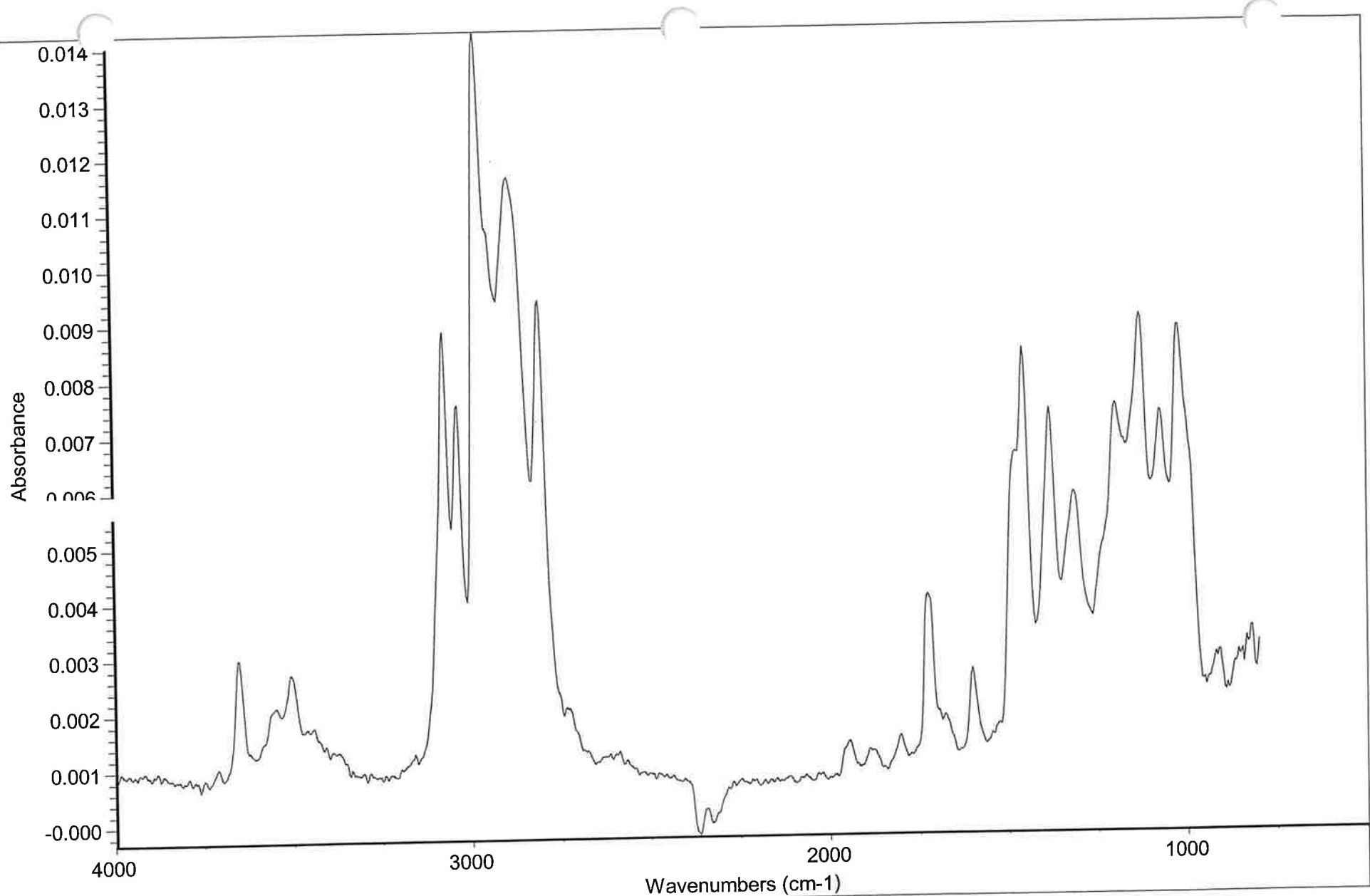
Collection time: Fri Jul 13 16:04:25 2001



Linked spectrum at 2.131 min. PSEUDOEPHEDRINE WHS

IR #1

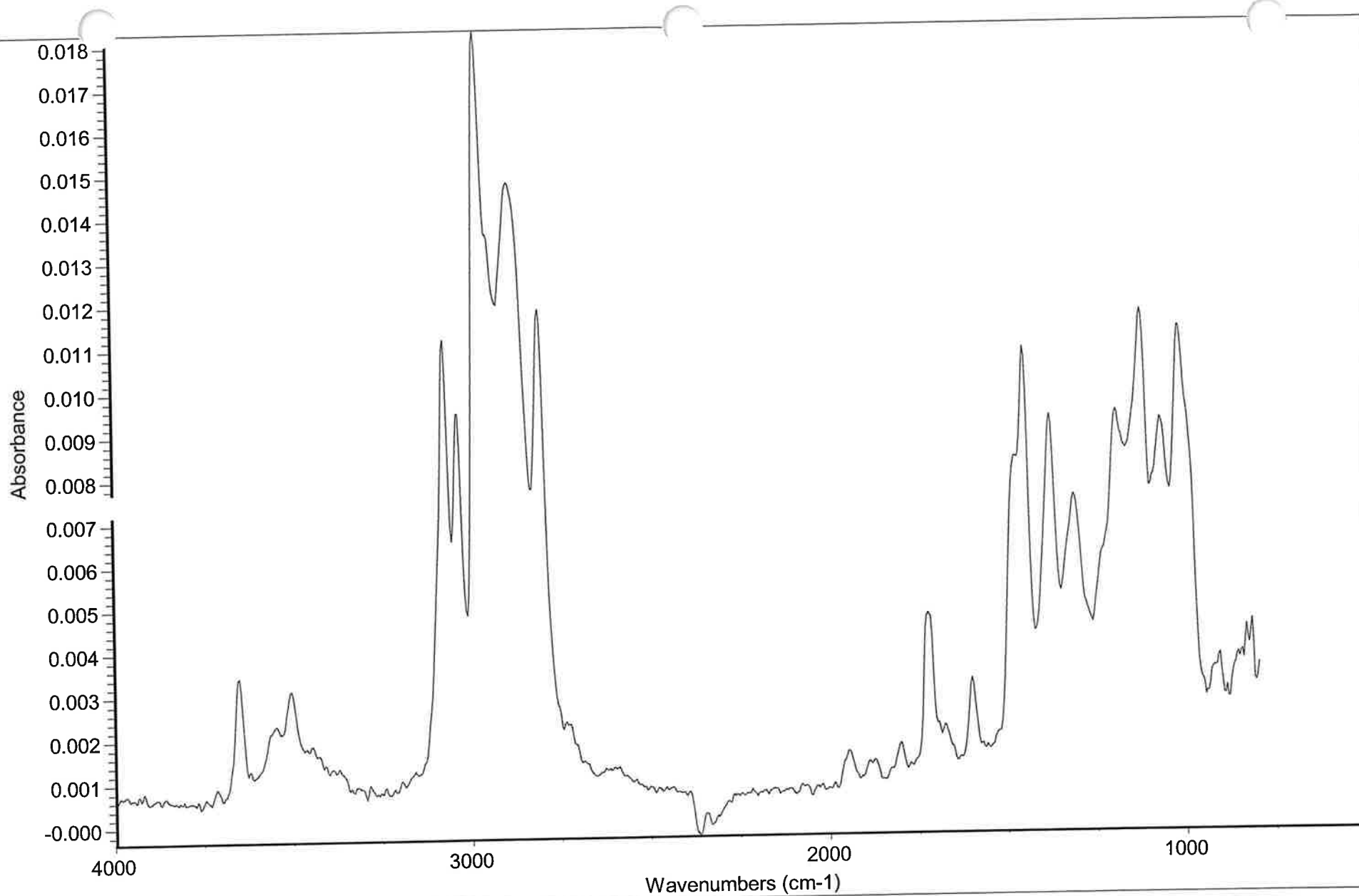
Collection time: Fri Jul 13 16:00:12 2001



Coadded spectrum: 3.83 - 3.86 min. EPHEDRINE WHS

IR #1

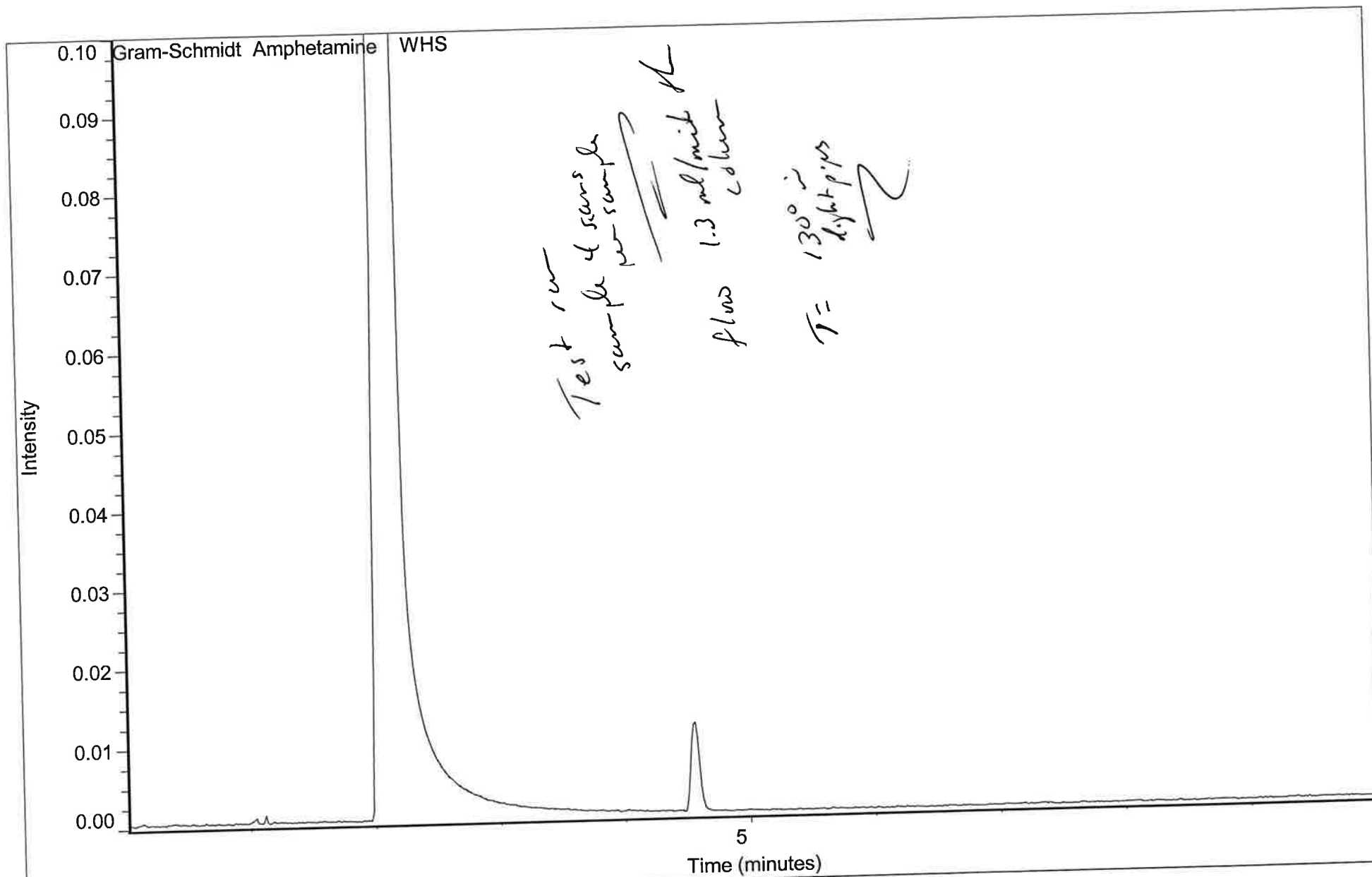
Collection time: Fri Jul 13 16:21:17 2001



Linked spectrum at 3.840 min. EPHEDRINE WHS

IR #1

Collection time: Fri Jul 13 16:13:39 2001

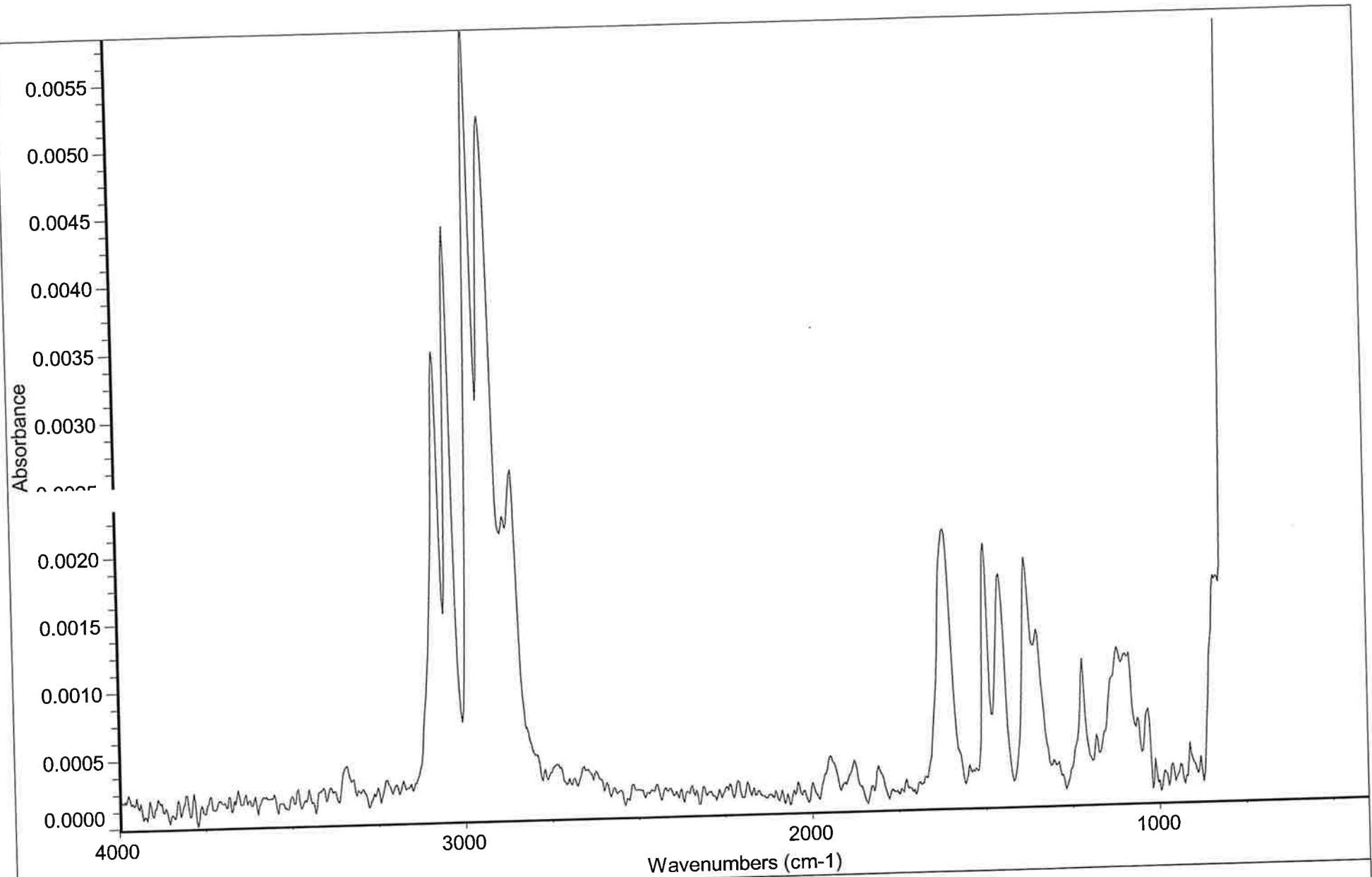


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.005 min.

Scans: 4

Resolution: 8.000

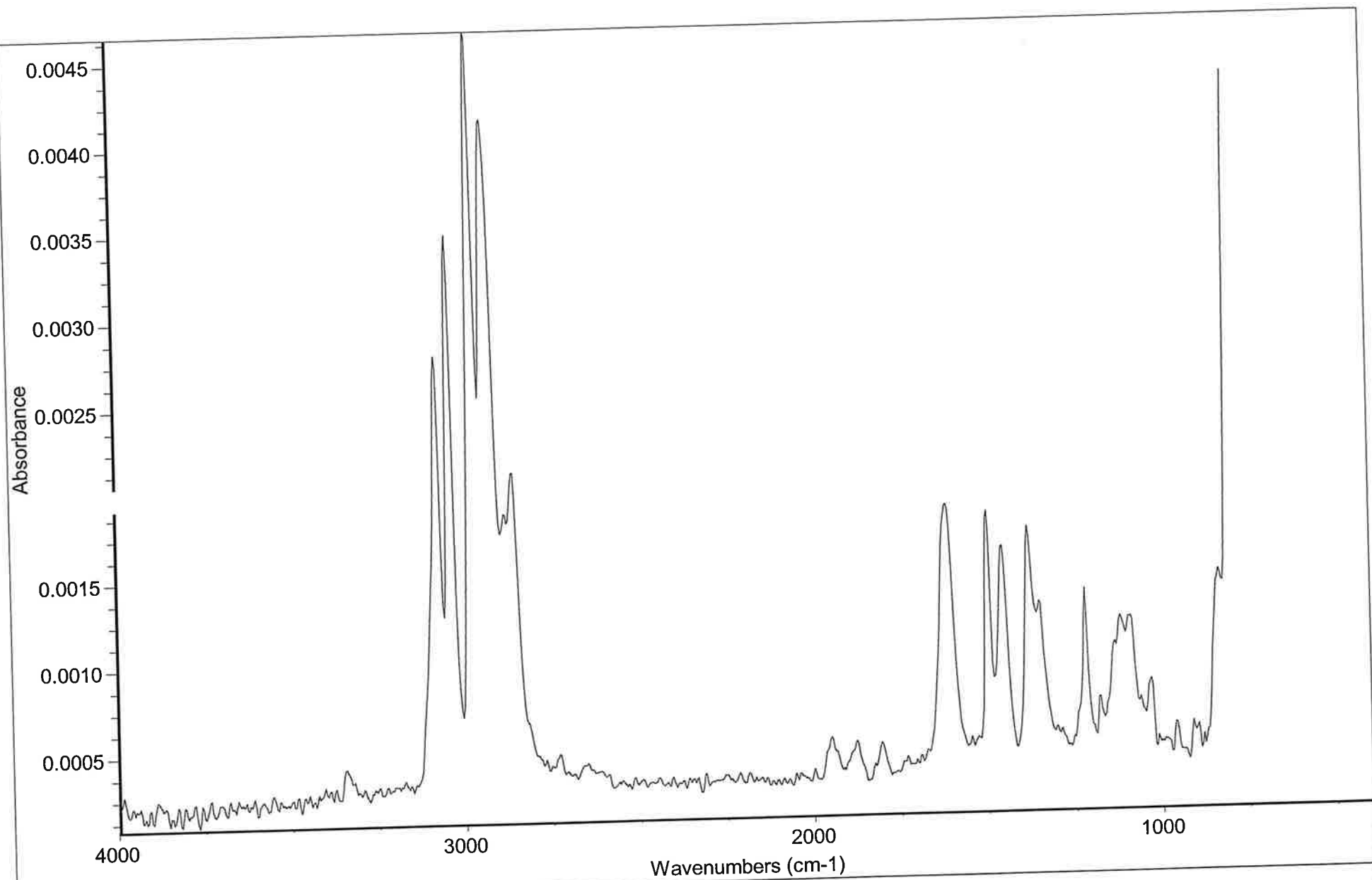


Date: Thu Jul 12 08:22:16 2001

AMPHETAMINE STANDARD WHS

Scans: 4

Resolution: 8.000

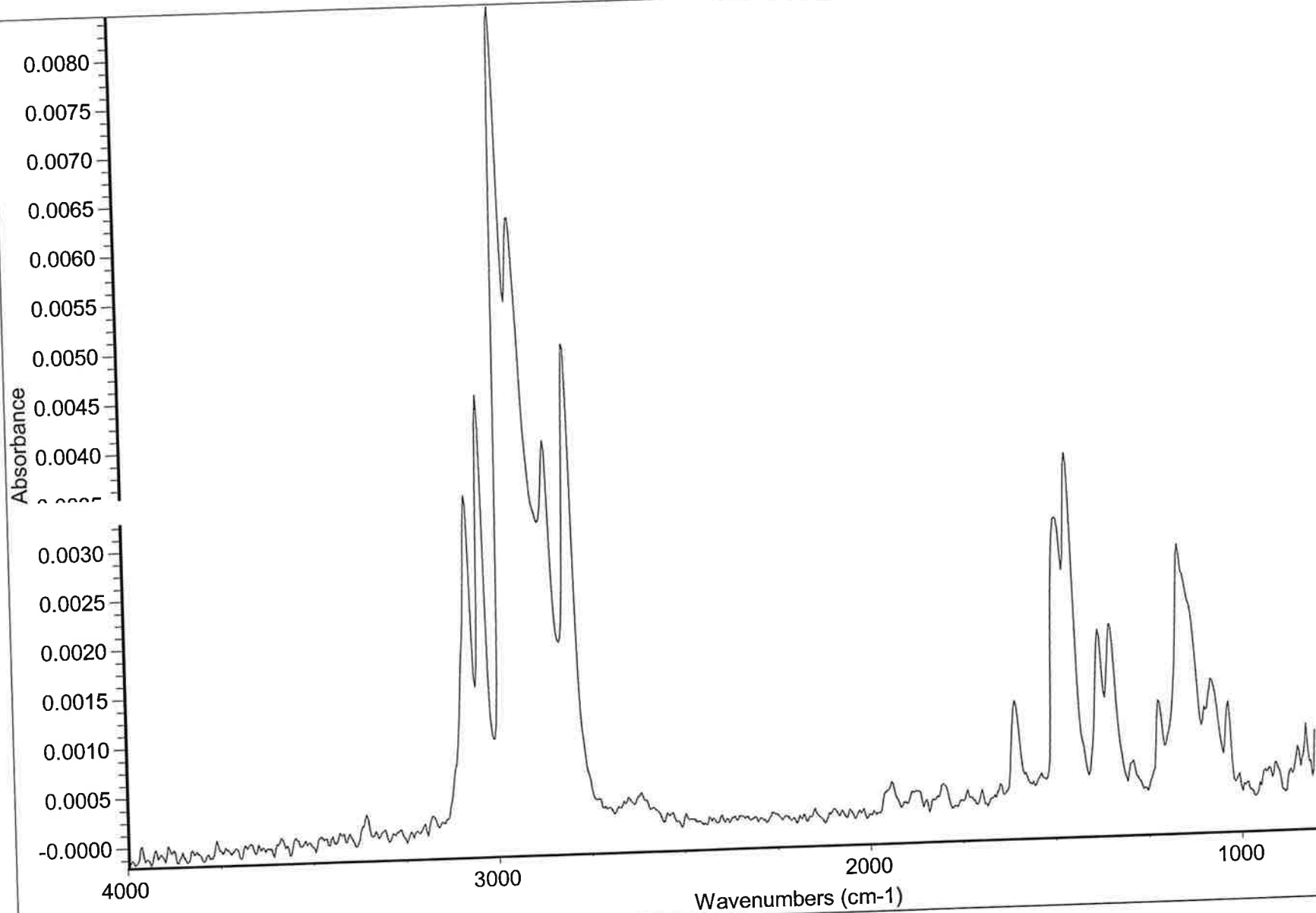


Date: Thu Jul 12 08:44:50 2001

Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD WHS

Scans: 24

Resolution: 8.000



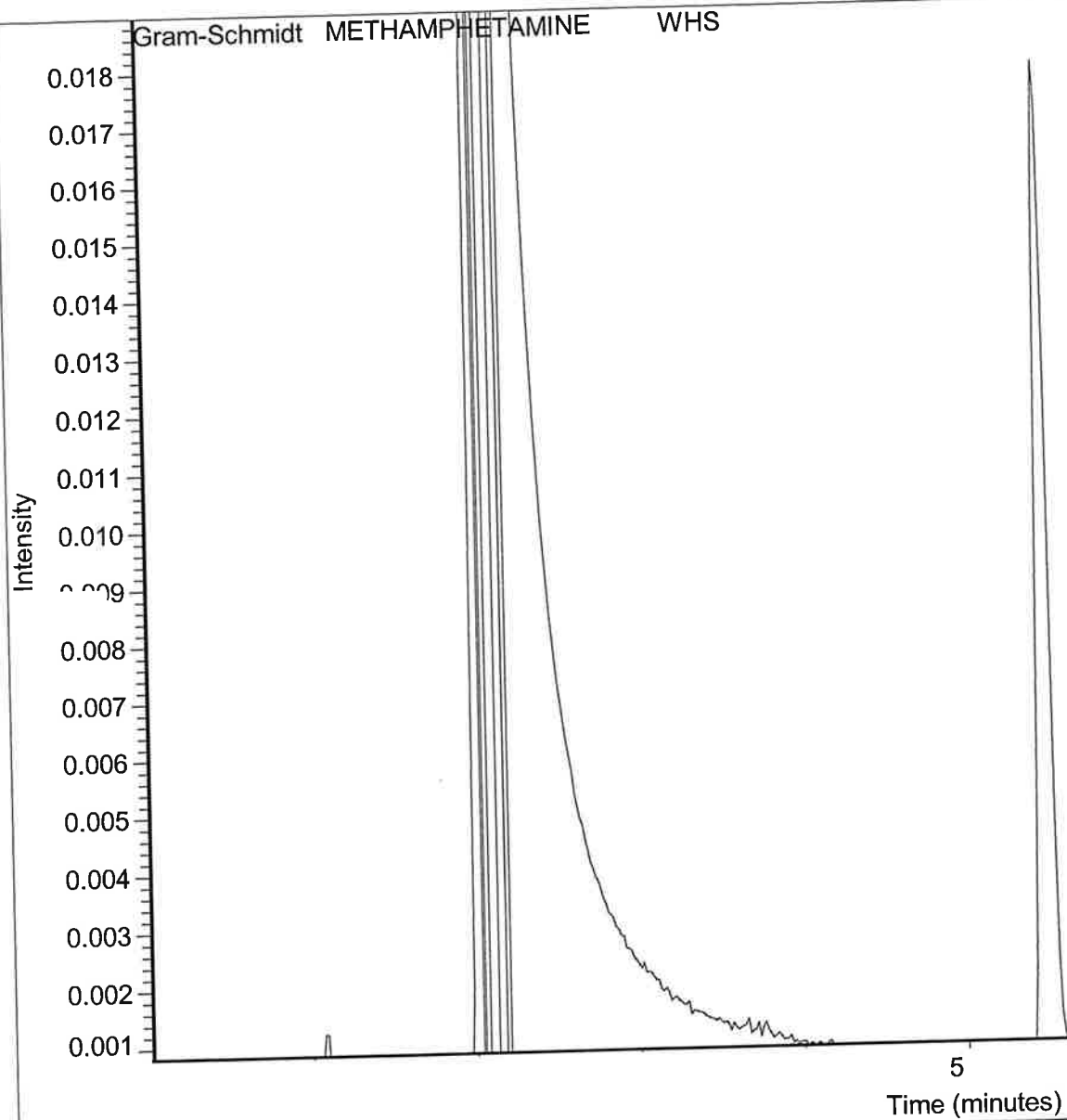
Date: Thu Jul 12 08:34:10 2001

METHAMPHETAMINE STANDARD

WHS

Scans: 4

Resolution: 8.000

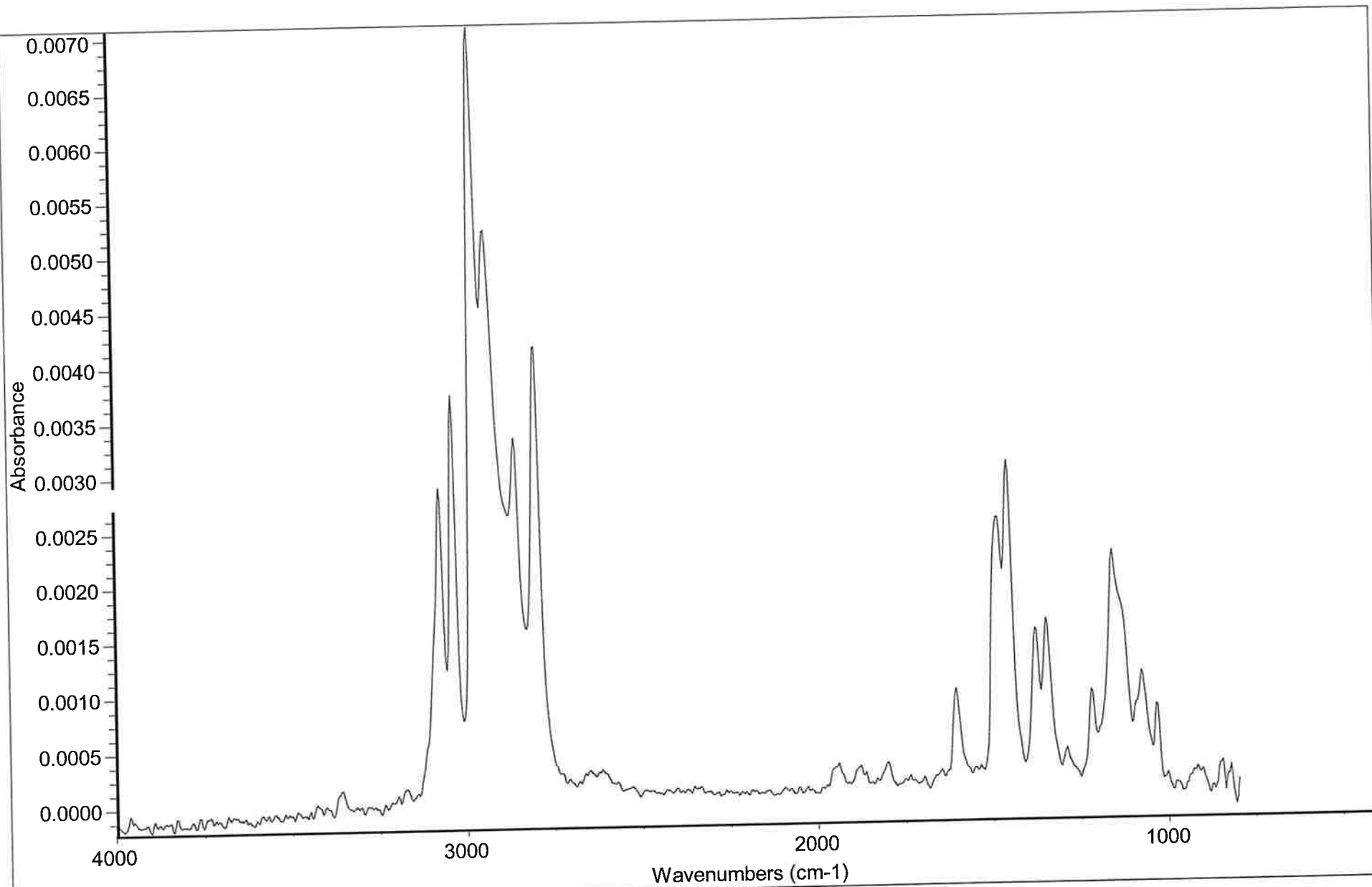


Date: Wed Feb 06 00:30:22 2036

Linked spectrum at 2.101 min.

Scans: 4

Resolution: 8.000

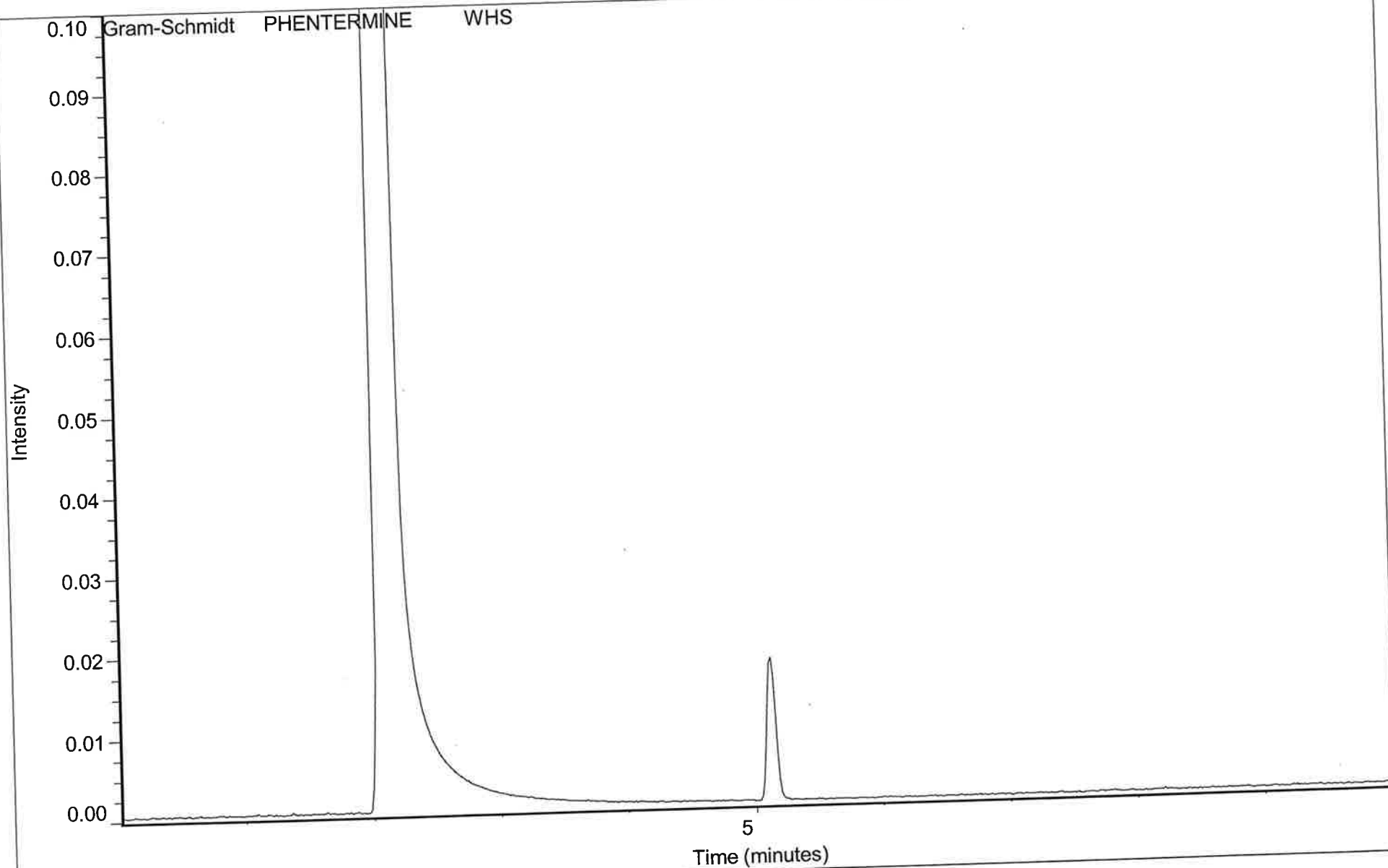


Date: Thu Jul 12 08:55:57 2001

Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDARD WHS

Scans: 20

Resolution: 8.000

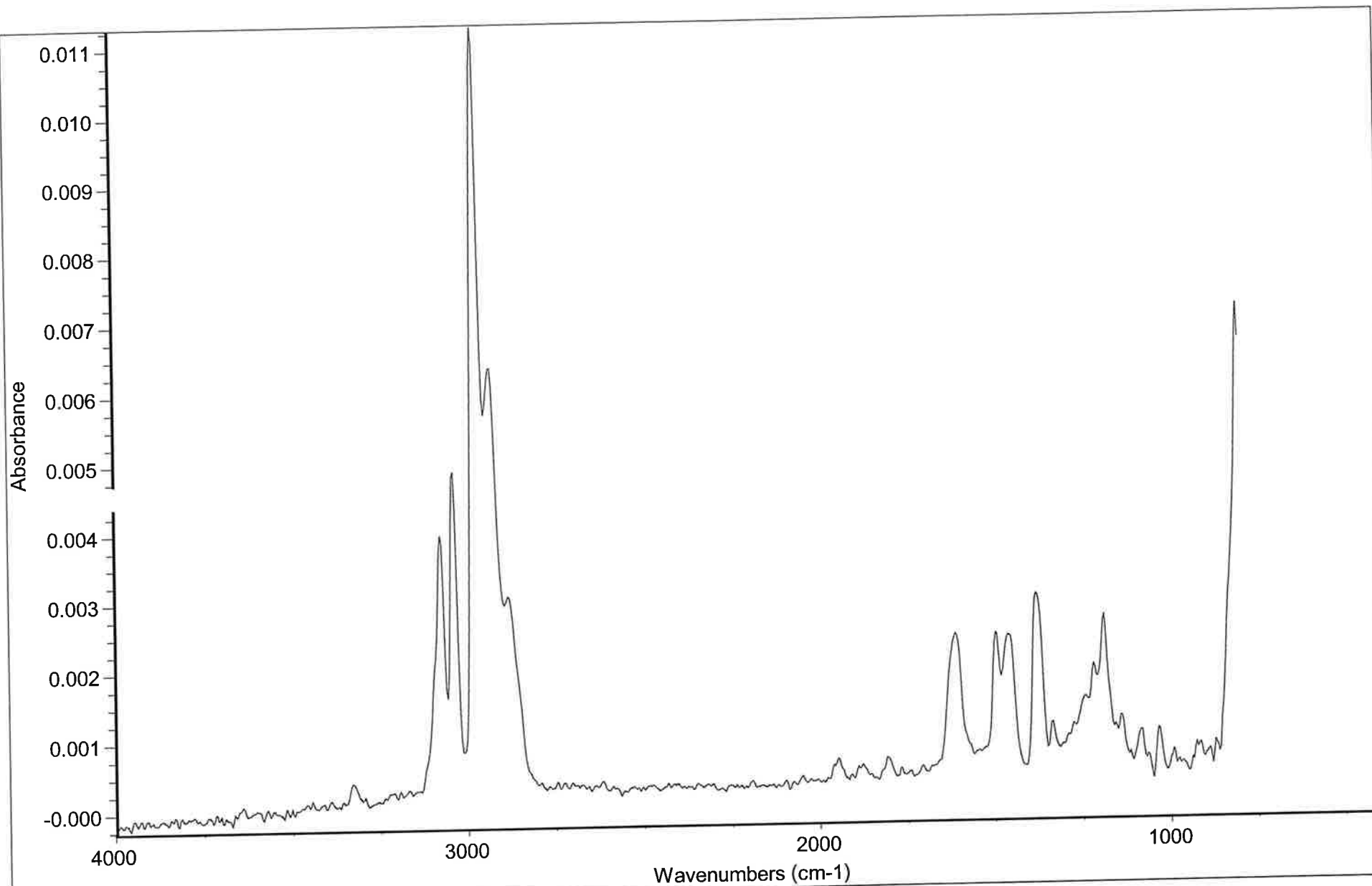


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.007 min.

Scans: 4

Resolution: 8.000

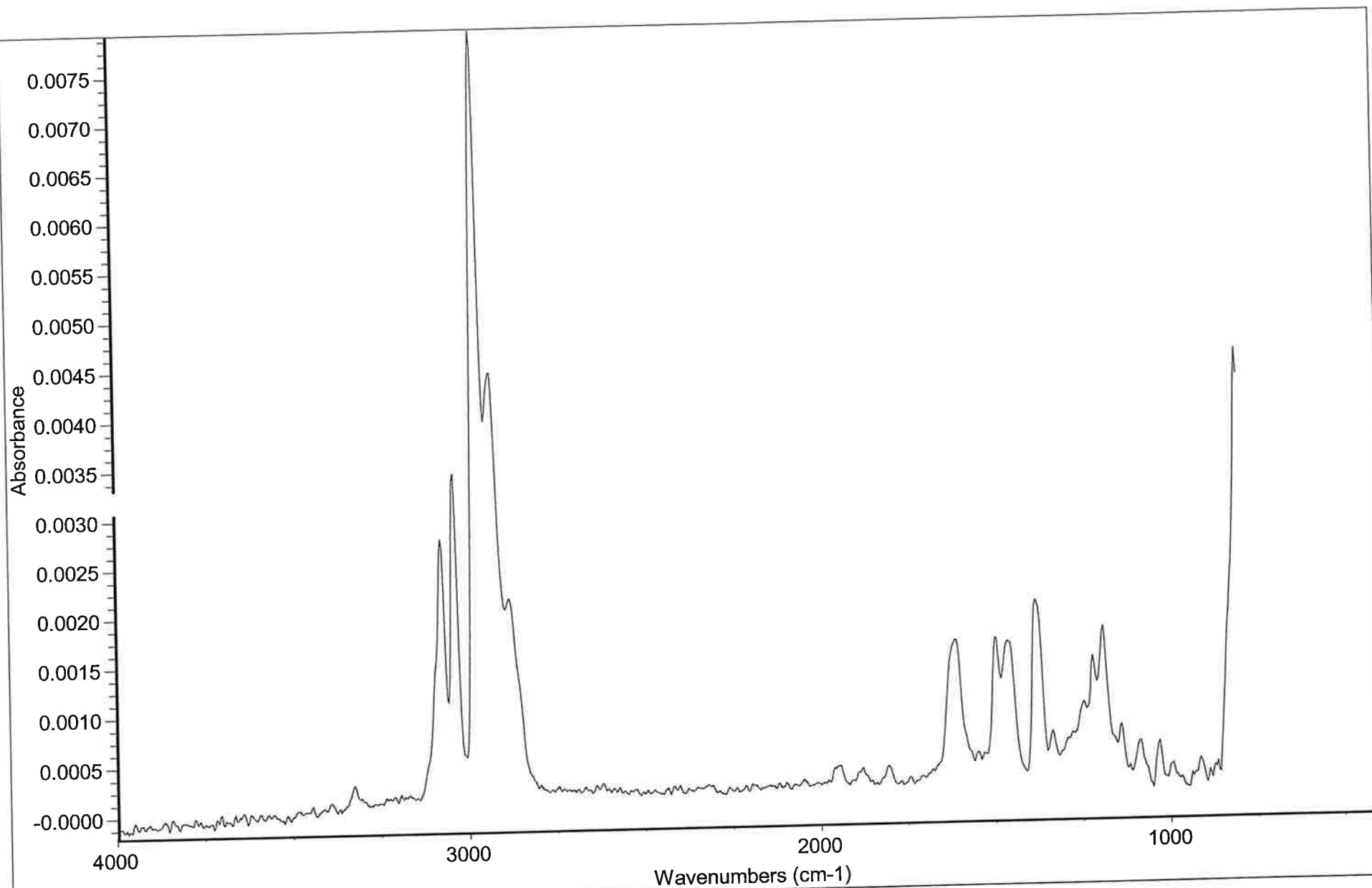


Date: Thu Jul 12 08:44:38 2001

PHENTERMINE STANDARD WHS

Scans: 4

Resolution: 8.000

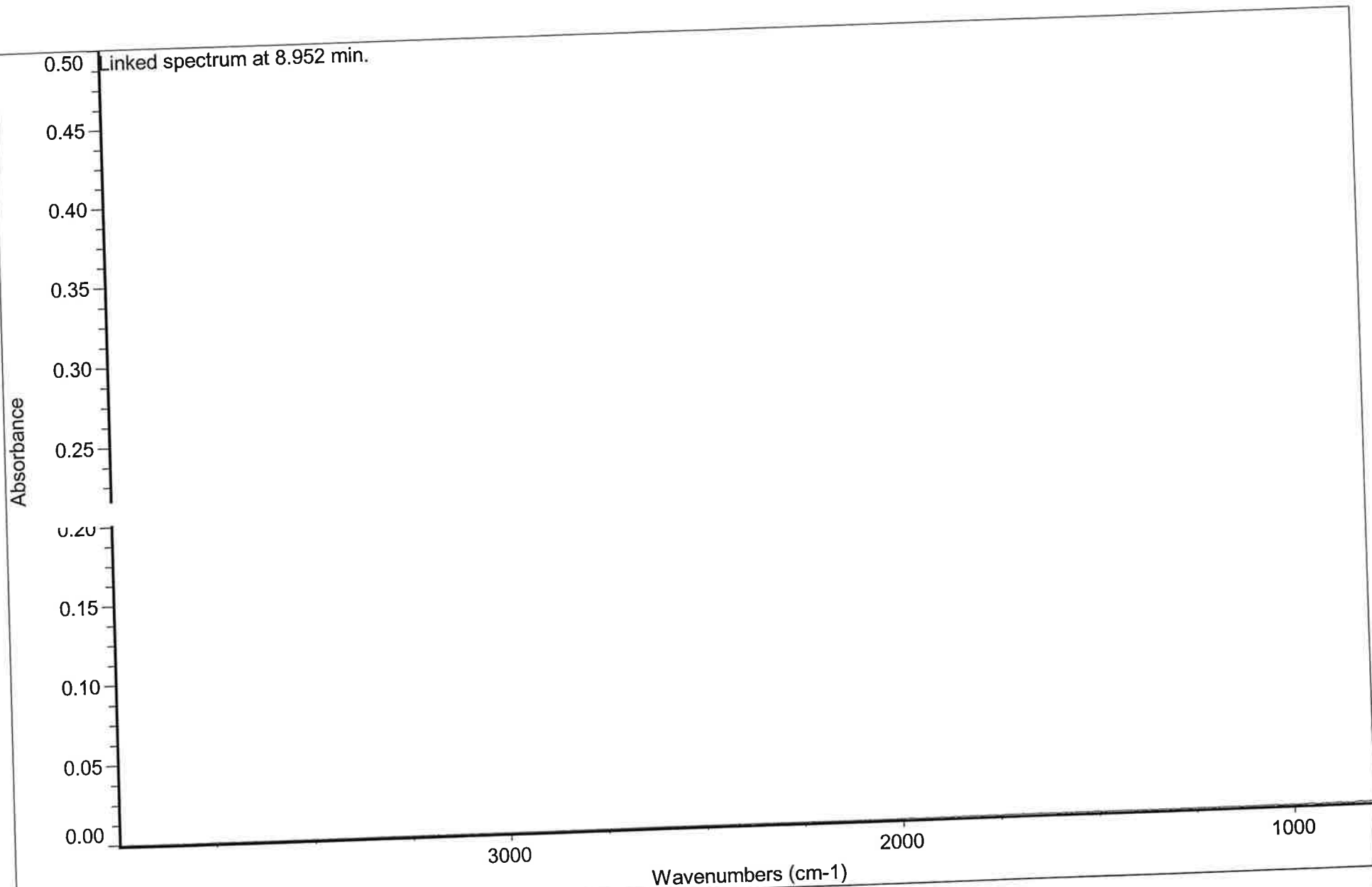


Date: Thu Jul 12 09:15:04 2001

Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD WHS

Scans: 28

Resolution: 8.000

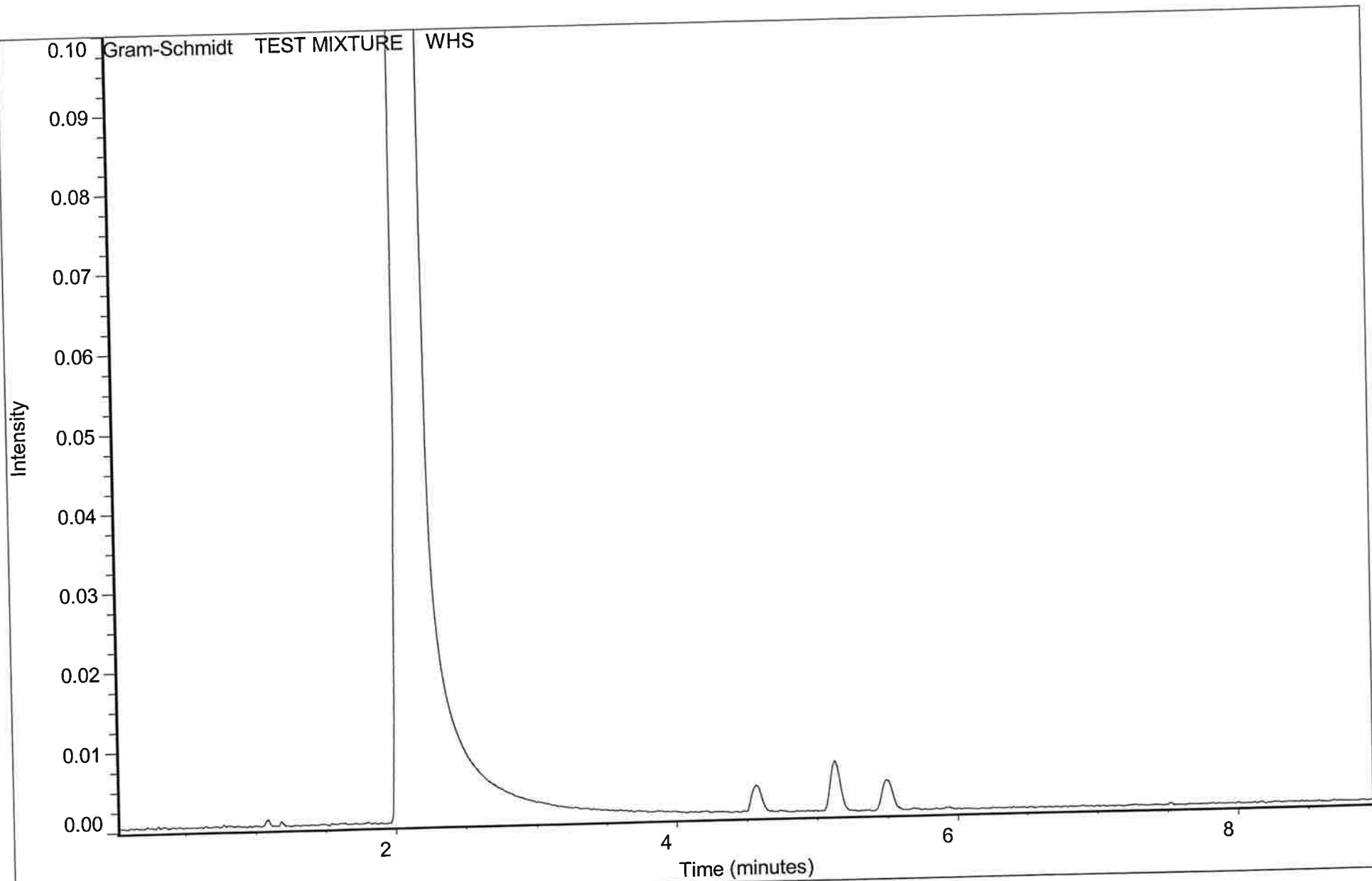


Date: Wed Feb 06 00:37:13 2036

Linked spectrum at 8.952 min.

Scans: 4

Resolution: 8.000



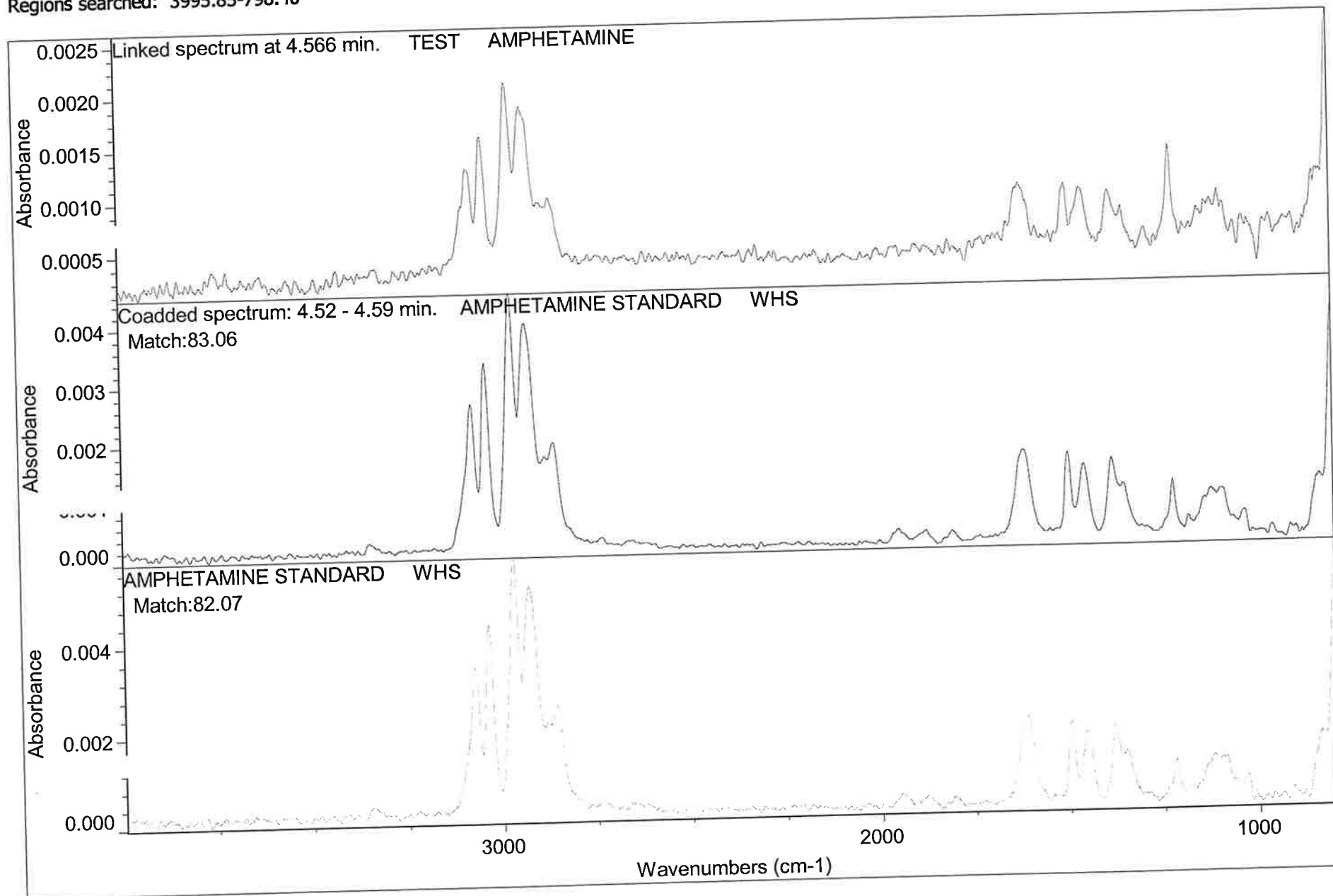
Date: Wed Feb 06 00:37:13 2036

Linked spectrum at 8.952 min.

Scans: 4

Resolution: 8.000

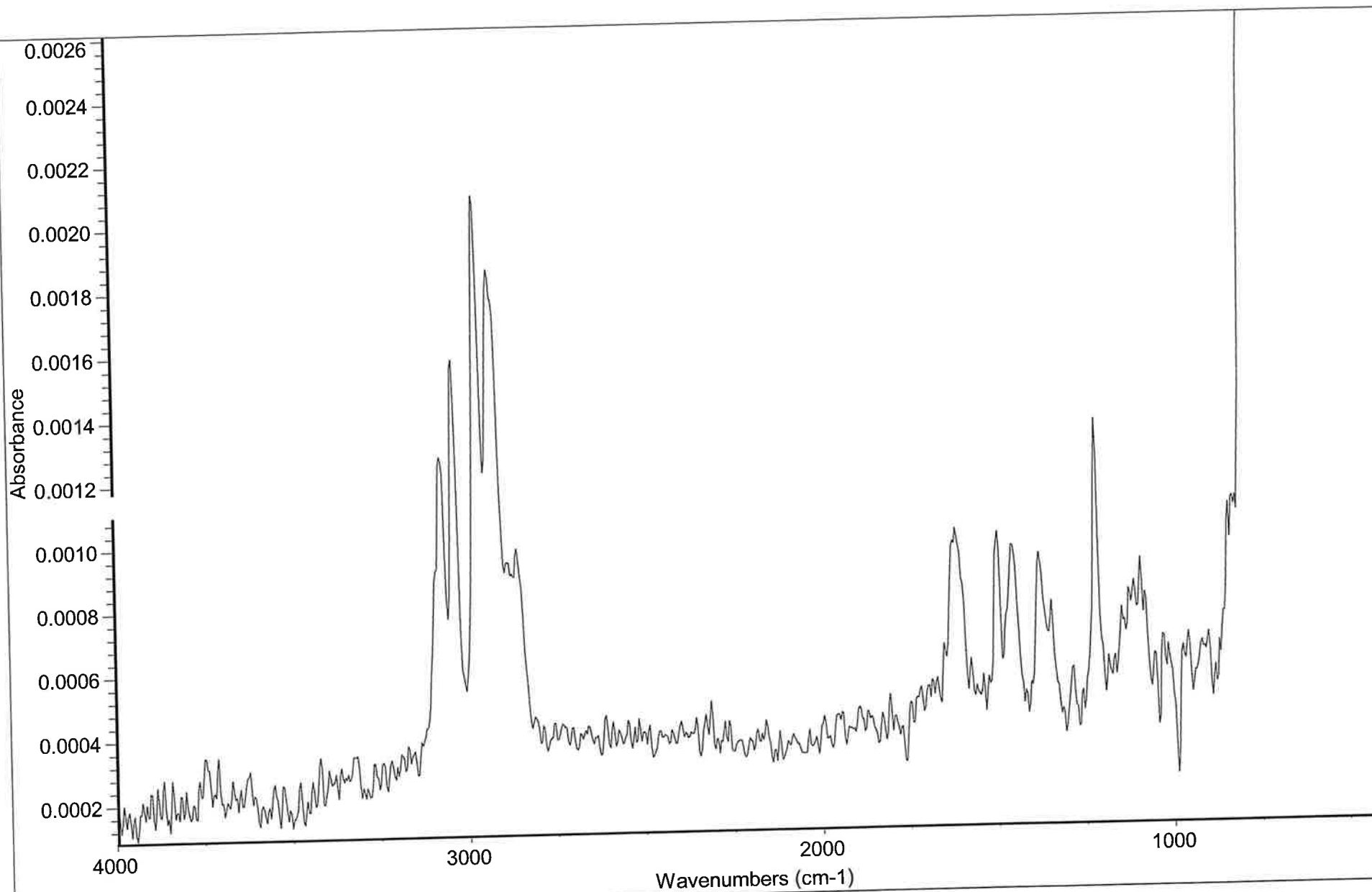
Search results for: Linked spectrum at 4.566 min. TEST AMPHETAMINE
Date: Thu Jul 12 09:14:48 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Linked spectrum at 4.566 min. TEST AMPHETAMINE
Date: Thu Jul 12 09:14:48 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

		Compound Name		Library Name
Index	Match			
1	2	83.06	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	82.07	AMPHETAMINE STANDARD WHS	TEST
3	6	68.58	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	67.60	PHENTERMINE STANDARD WHS	TEST
5	3	52.11	METHAMPHETAMINE STANDARD WHS	TEST
6	4	51.94	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	Aldrich Vapor Phase Sample Library
7	4	49.02	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	11	48.15	2,6,10,14-TETRAMETHYLPENTADECANE, 96%	Aldrich Vapor Phase Sample Library
9	58	47.36	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
10	74	46.77	HEPTANE, 99%	



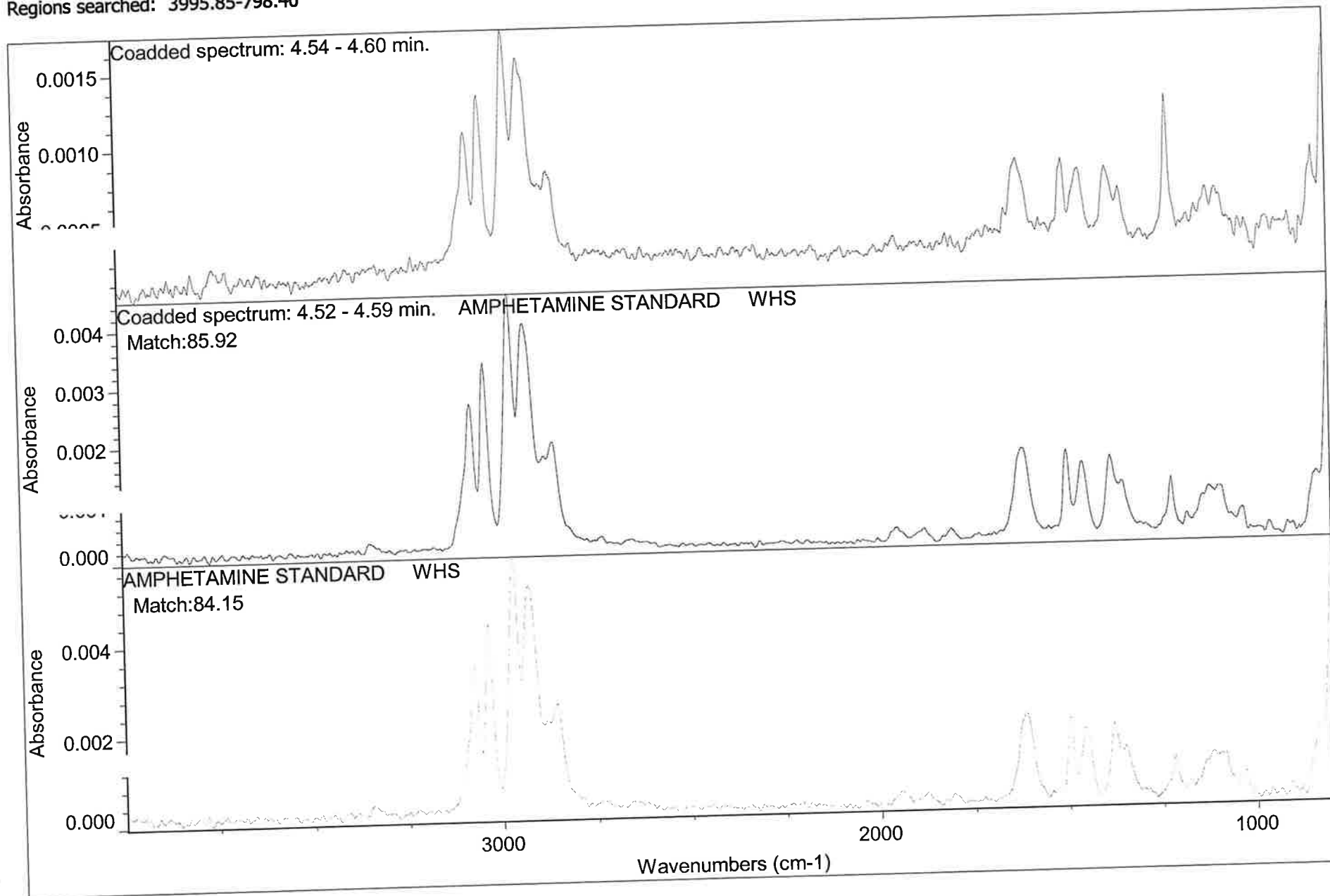
Date: Thu Jul 12 08:54:52 2001

Linked spectrum at 4.566 min. TEST AMPHETAMINE

Scans: 4

Resolution: 8.000

Search results for: Coadded spectrum: 4.54 - 4.60 min.
Date: Thu Jul 12 09:15:31 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 4.54 - 4.60 min.

Date: Thu Jul 12 09:15:31 2001

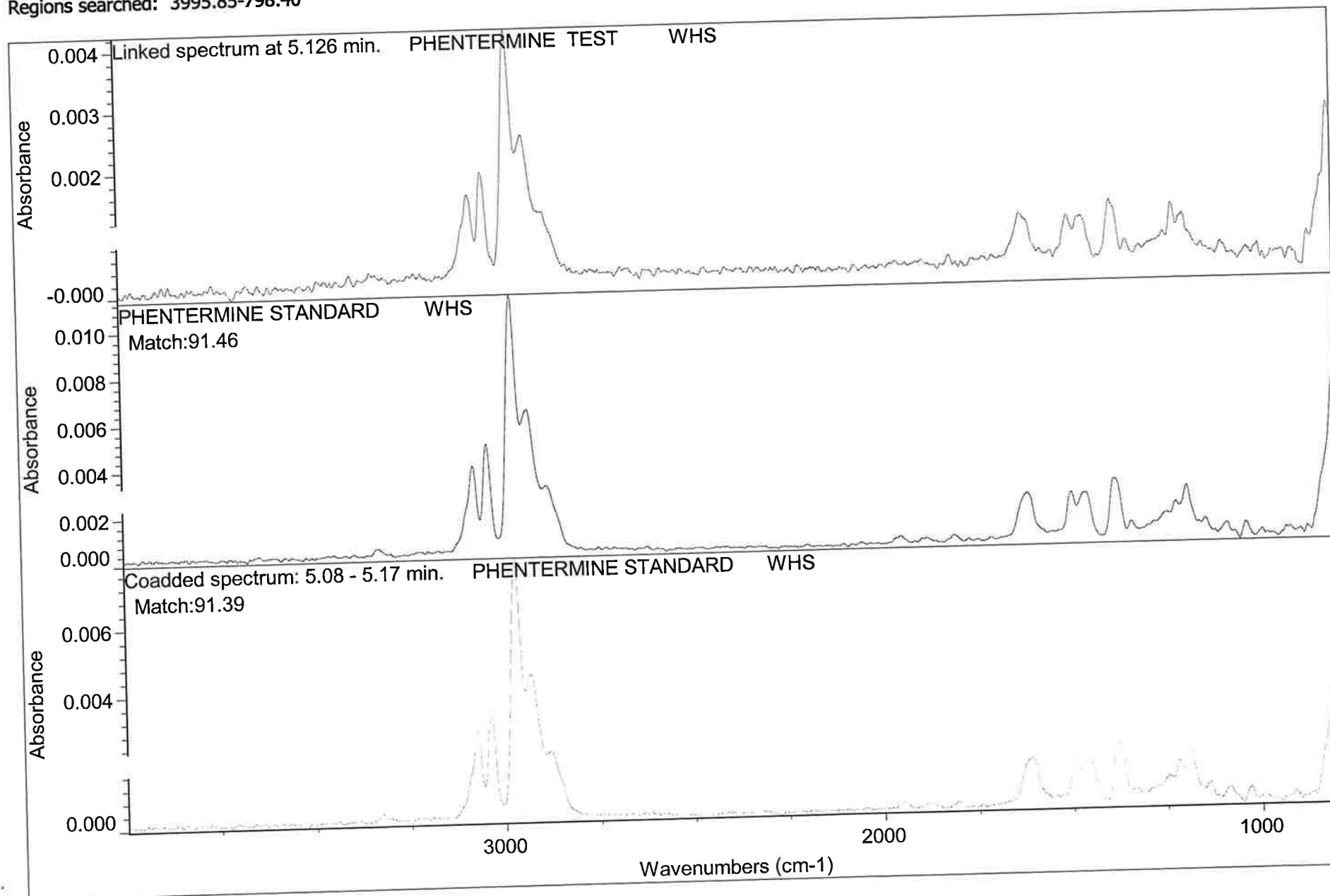
Search algorithm: Correlation

Regions searched: 3995.85-798.40

Search results list of matches

		Compound Name		Library Name
Index	Match			
1	2	85.92	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	84.15	AMPHETAMINE STANDARD WHS	TEST
3	6	72.49	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	71.95	PHENTERMINE STANDARD WHS	TEST
5	3	57.07	METHAMPHETAMINE STANDARD WHS	TEST
6	4	56.27	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	Aldrich Vapor Phase Sample Library
7	4	50.40	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	11	48.86	2,6,10,14-TETRAMETHYLPENTADECANE, 96%	Aldrich Vapor Phase Sample Library
9	58	48.74	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
10	74	47.63	HEPTANE, 99%	

Search results for: Linked spectrum at 5.126 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 09:16:19 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



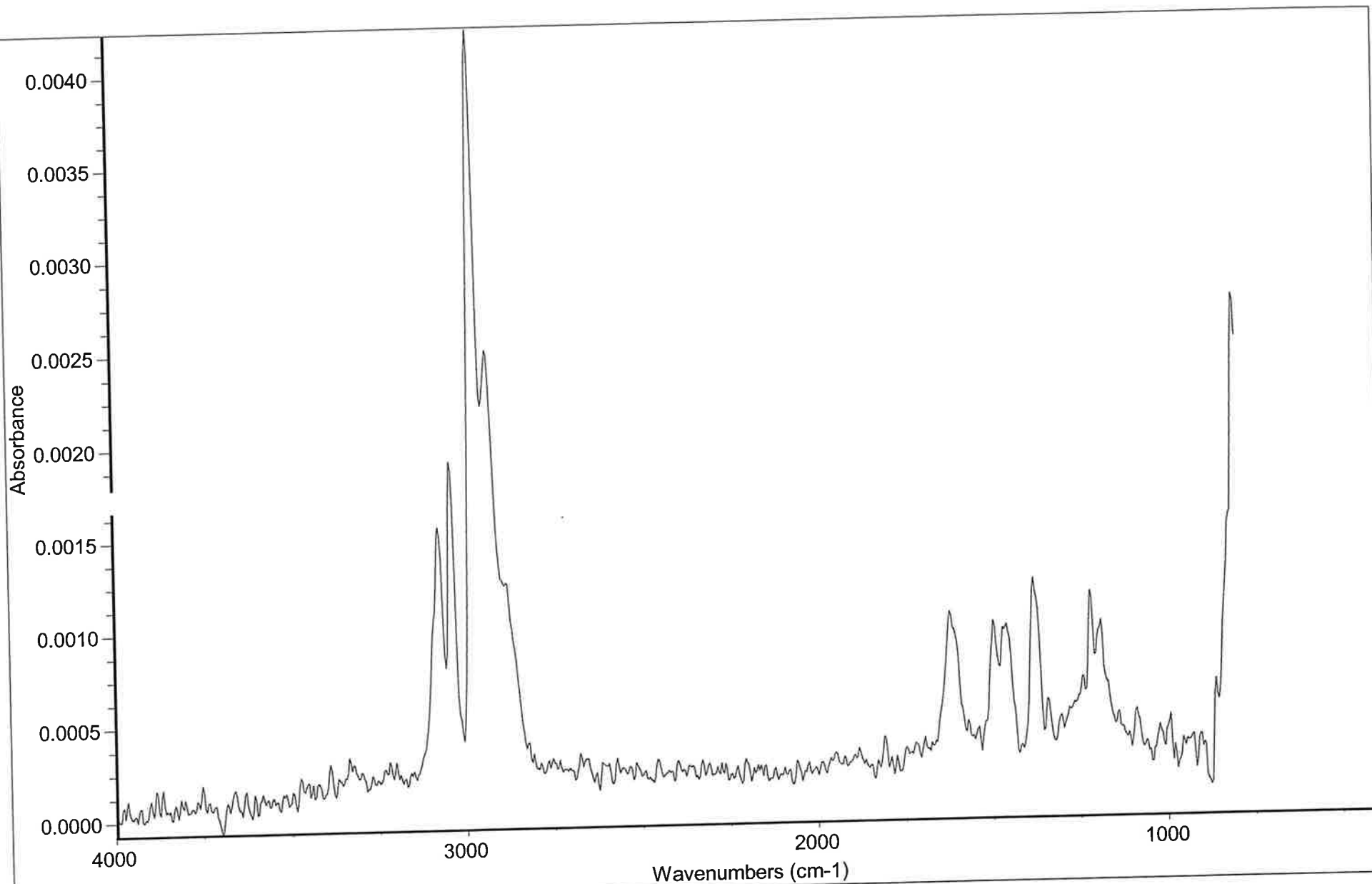
Search results for: Linked spectrum at 5.126 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 09:16:19 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	
1	5	91.46	PHENTERMINE STANDARD	WHS
2	6	91.39	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	
3	2	78.91	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	
4	1	78.47	AMPHETAMINE STANDARD	WHS
5	4	76.44	TERT-BUTYLBENZENE, 99%	
6	74	74.49	HEPTANE, 99%	
7	23	70.54	2,4-DIMETHYL-3-PENTANOL, 99%	
8	64	69.33	ISOBUTYLAMINE, 99%	
9	58	67.17	TERPINEN-4-OL, 95%	
10	31	65.57	TRANS-4-OCTENE, 99%	

Library Name

TEST
TEST
TEST
TEST
Aldrich Vapor Phase Sample Library
Aldrich Vapor Phase Sample Library
Aldrich Vapor Phase Sample Library
Aldrich Vapor Phase Sample Library
Aldrich Vapor Phase Sample Library
Aldrich Vapor Phase Sample Library



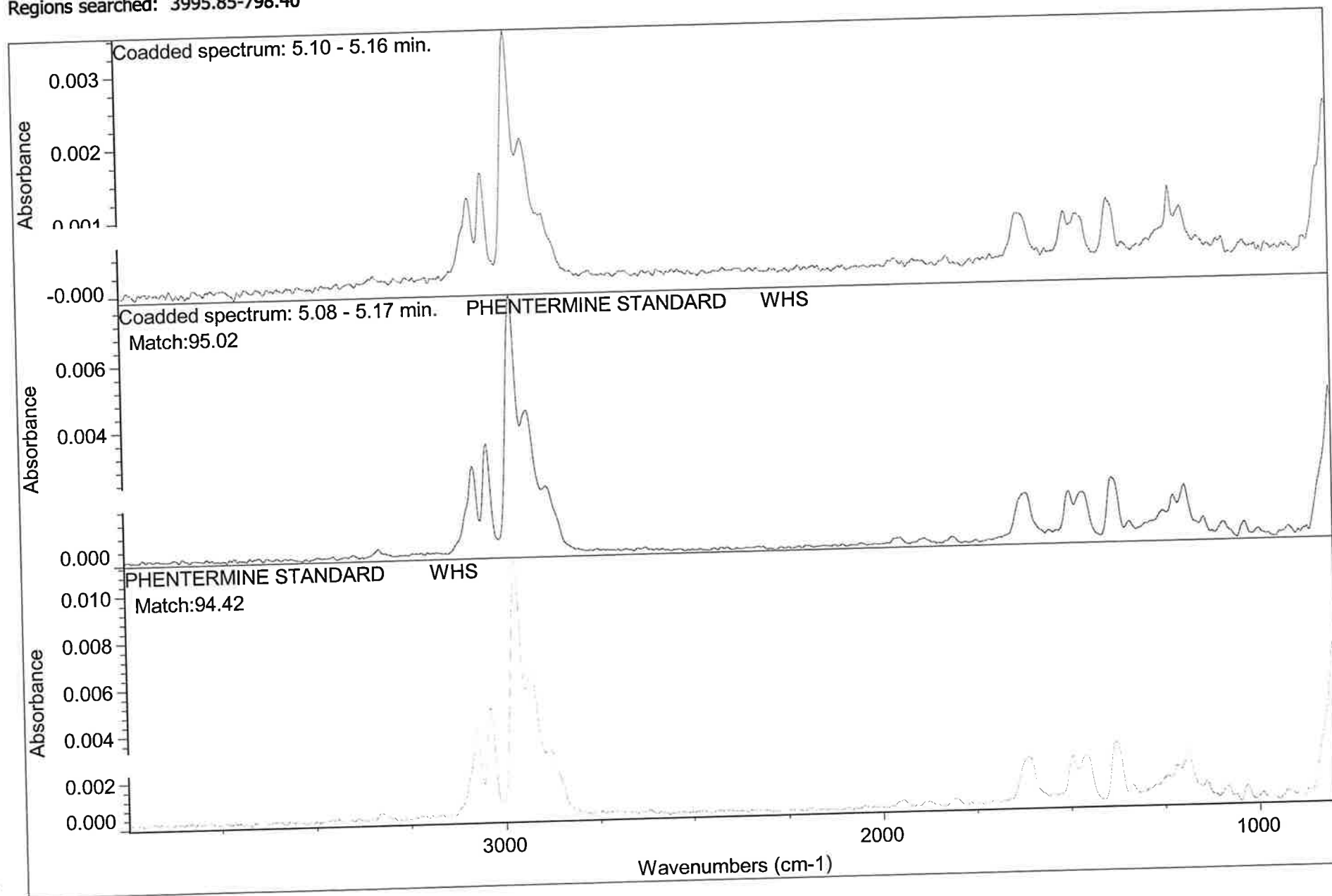
Date: Thu Jul 12 08:55:26 2001

Linked spectrum at 5.126 min. PHENTERMINE TEST WHS

Scans: 4

Resolution: 8.000

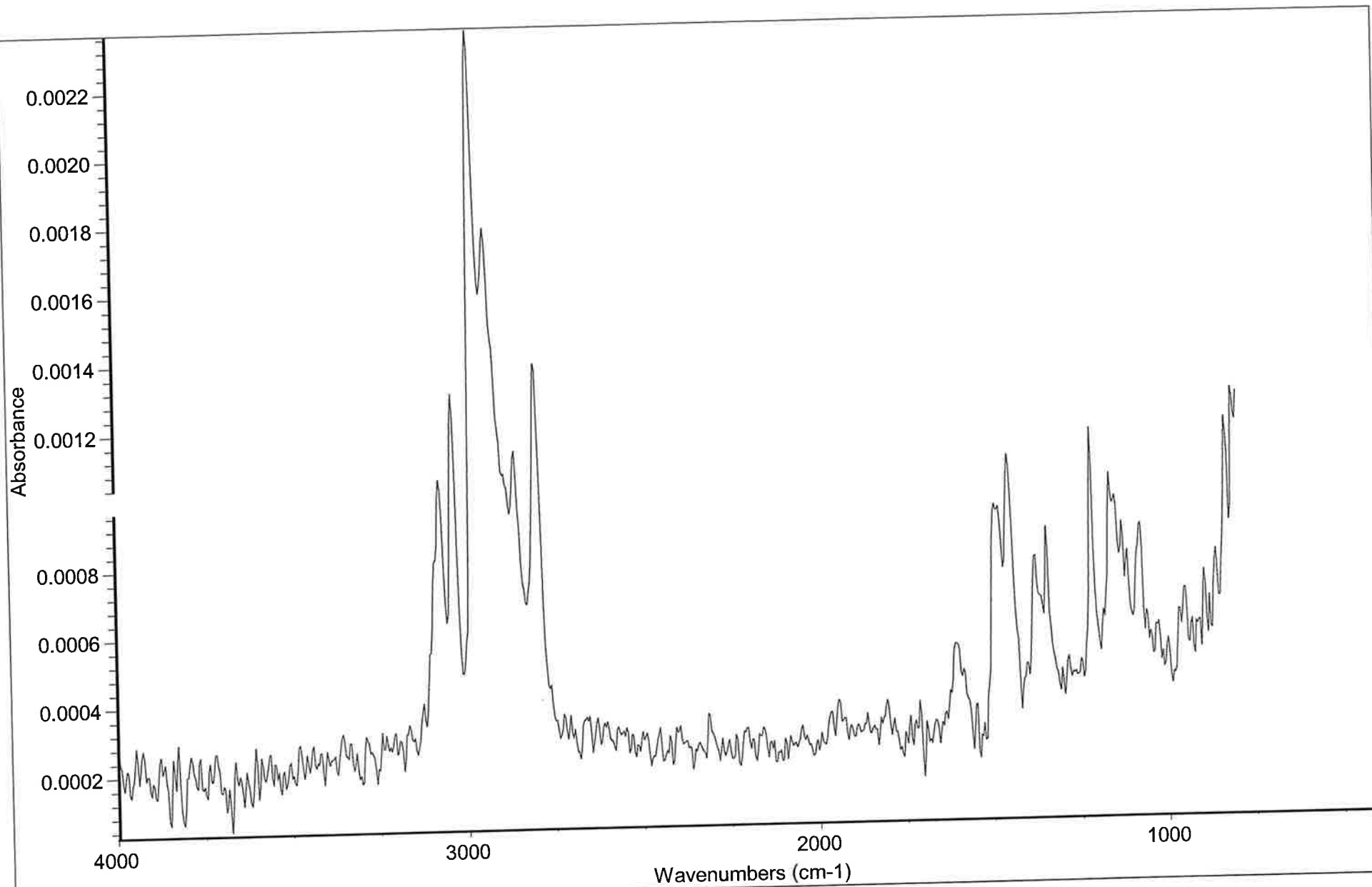
Search results for: Coadded spectrum: 5.10 - 5.16 min.
Date: Thu Jul 12 09:16:56 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.10 - 5.16 min.
Date: Thu Jul 12 09:16:56 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

		Match	Compound Name	Library Name
1	6	95.02	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	94.42	PHENTERMINE STANDARD WHS	TEST
3	2	82.37	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	81.46	AMPHETAMINE STANDARD WHS	TEST
5	4	77.89	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
6	74	75.44	HEPTANE, 99%	Aldrich Vapor Phase Sample Library
7	23	70.78	2,4-DIMETHYL-3-PENTANOL, 99%	Aldrich Vapor Phase Sample Library
8	64	70.10	ISOBUTYLAMINE, 99%	Aldrich Vapor Phase Sample Library
9	58	67.25	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
10	4	67.08	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDAR	TEST



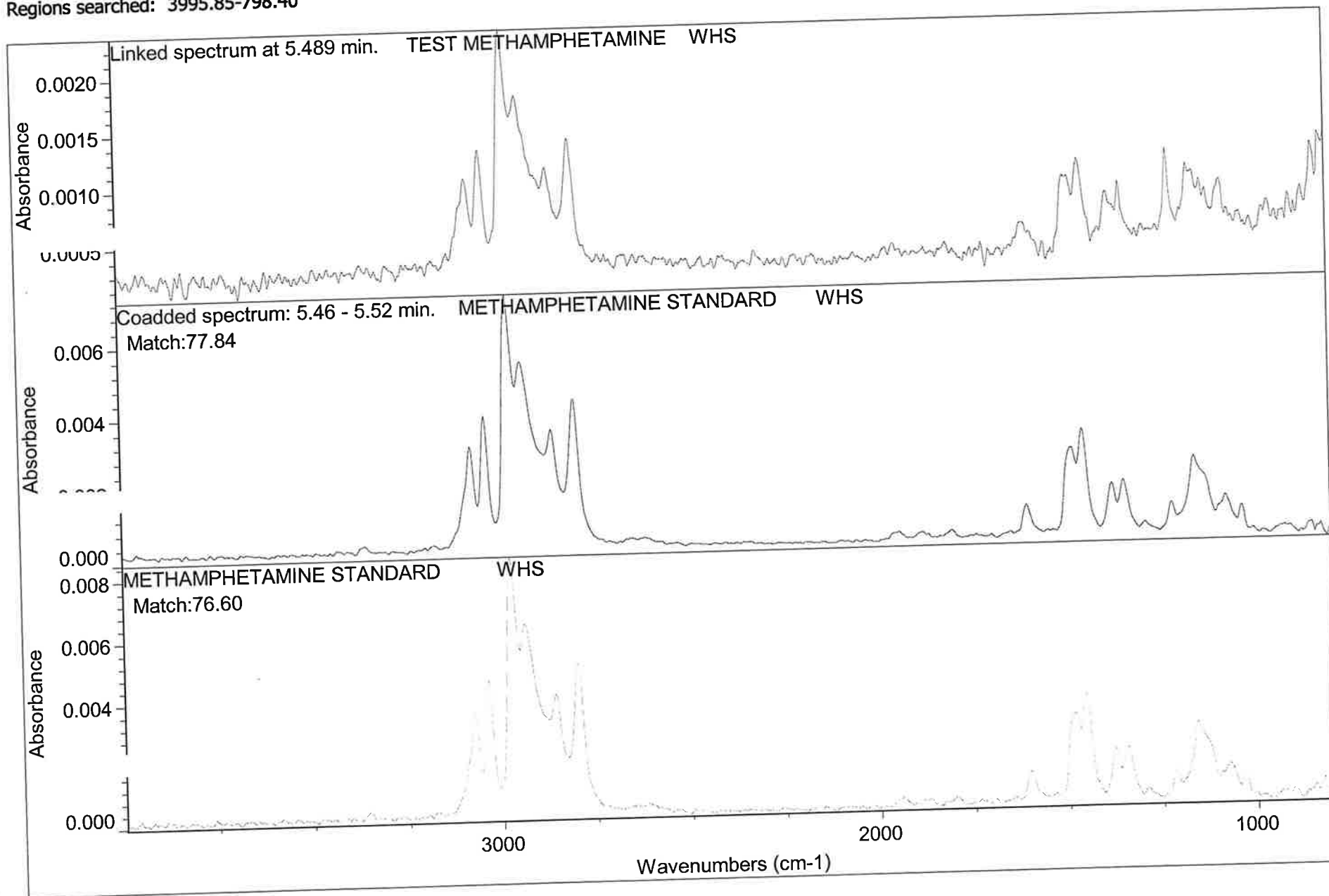
Date: Thu Jul 12 08:55:48 2001

Linked spectrum at 5.489 min. TEST METHAMPHETAMINE WHS

Scans: 4

Resolution: 8.000

Search results for: Linked spectrum at 5.489 min. TEST METHAMPHETAMINE WHS
Date: Thu Jul 12 09:17:37 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

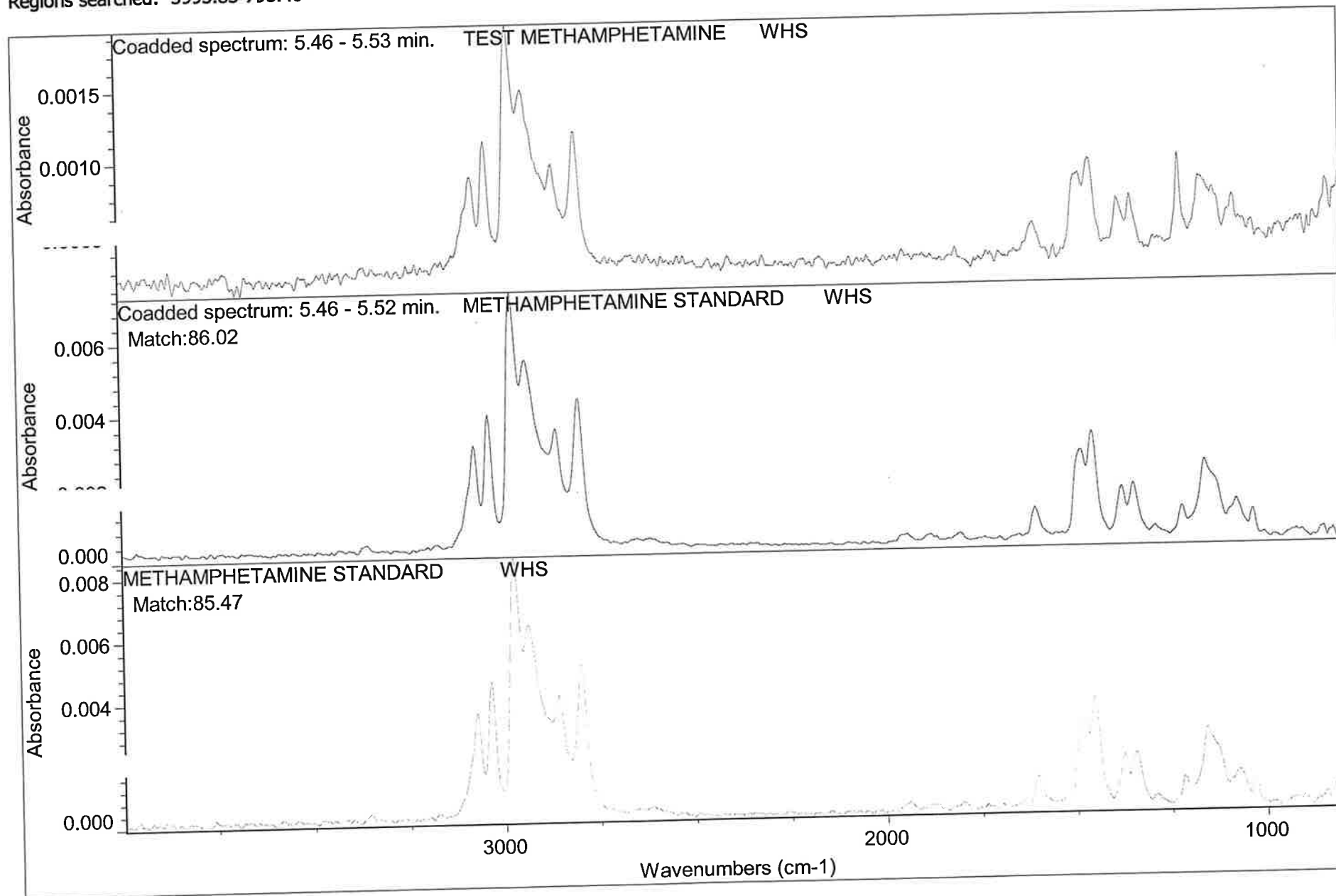


Search results for: Linked spectrum at 5.489 min. TEST METHAMPHETAMINE WHS
Date: Thu Jul 12 09:17:37 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

Index		Match	Compound Name	Library Name
1	4	77.84	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	76.60	METHAMPHETAMINE STANDARD WHS	TEST
3	6	60.09	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	59.32	PHENTERMINE STANDARD WHS	TEST
5	2	58.61	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
6	1	57.85	AMPHETAMINE STANDARD WHS	Aldrich Vapor Phase Sample Library
7	78	57.18	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
8	58	56.84	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	31	54.90	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library
10	4	54.42	TERT-BUTYLBENZENE, 99%	

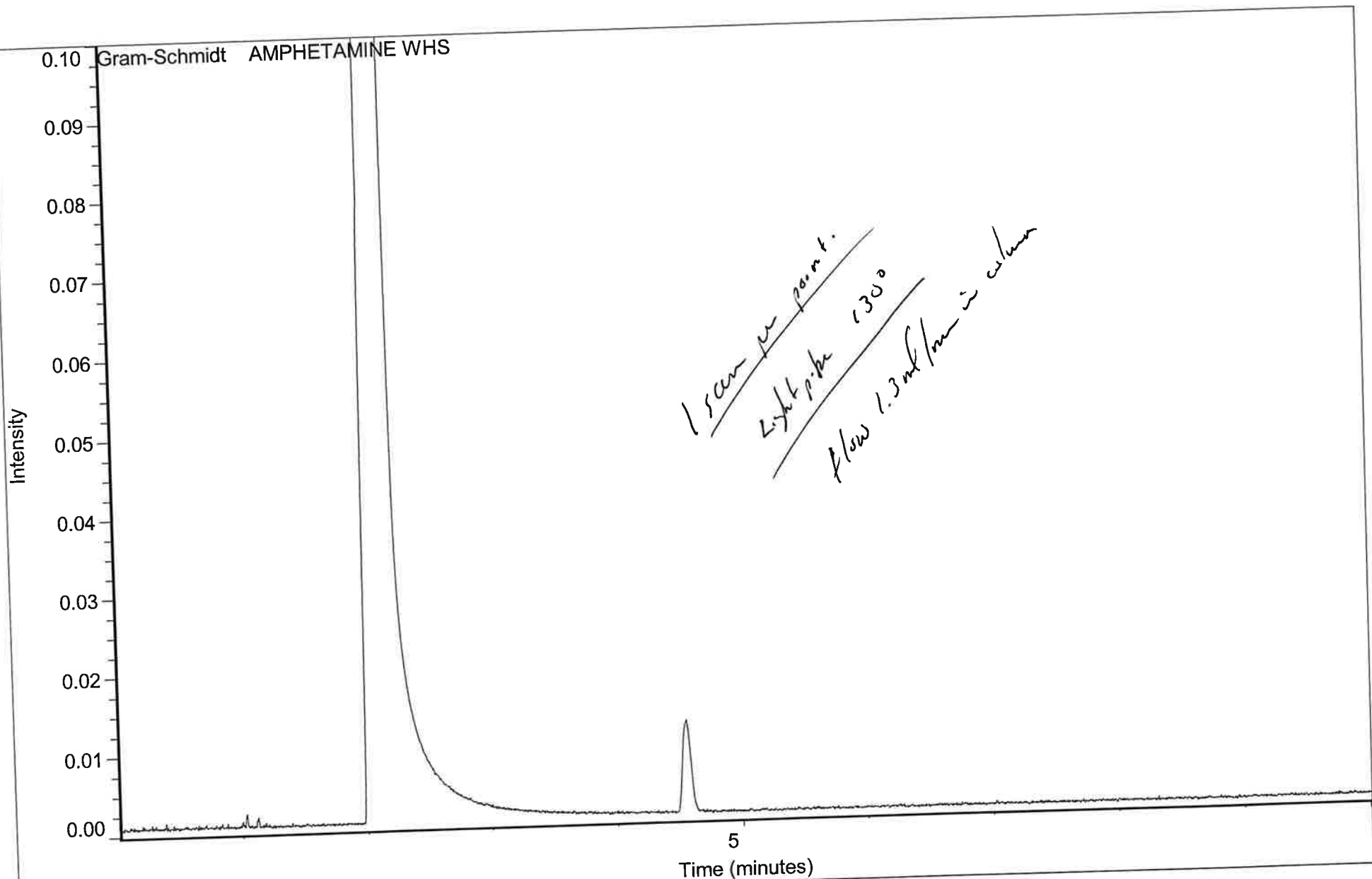
Search results for: Coadded spectrum: 5.46 - 5.53 min. TEST METHAMPHETAMINE WHS
Date: Thu Jul 12 09:18:20 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.46 - 5.53 min. TEST METHAMPHETAMINE WHS
Date: Thu Jul 12 09:18:20 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

		Compound Name		Library Name
Index	Match			
1	4	86.02	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	85.47	METHAMPHETAMINE STANDARD WHS	TEST
3	6	64.41	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	2	64.31	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
5	5	63.41	PHENTERMINE STANDARD WHS	TEST
6	1	63.06	AMPHETAMINE STANDARD WHS	Aldrich Vapor Phase Sample Library
7	78	58.43	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
8	58	57.62	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	31	55.93	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library
10	4	54.79	TERT-BUTYLBENZENE, 99%	

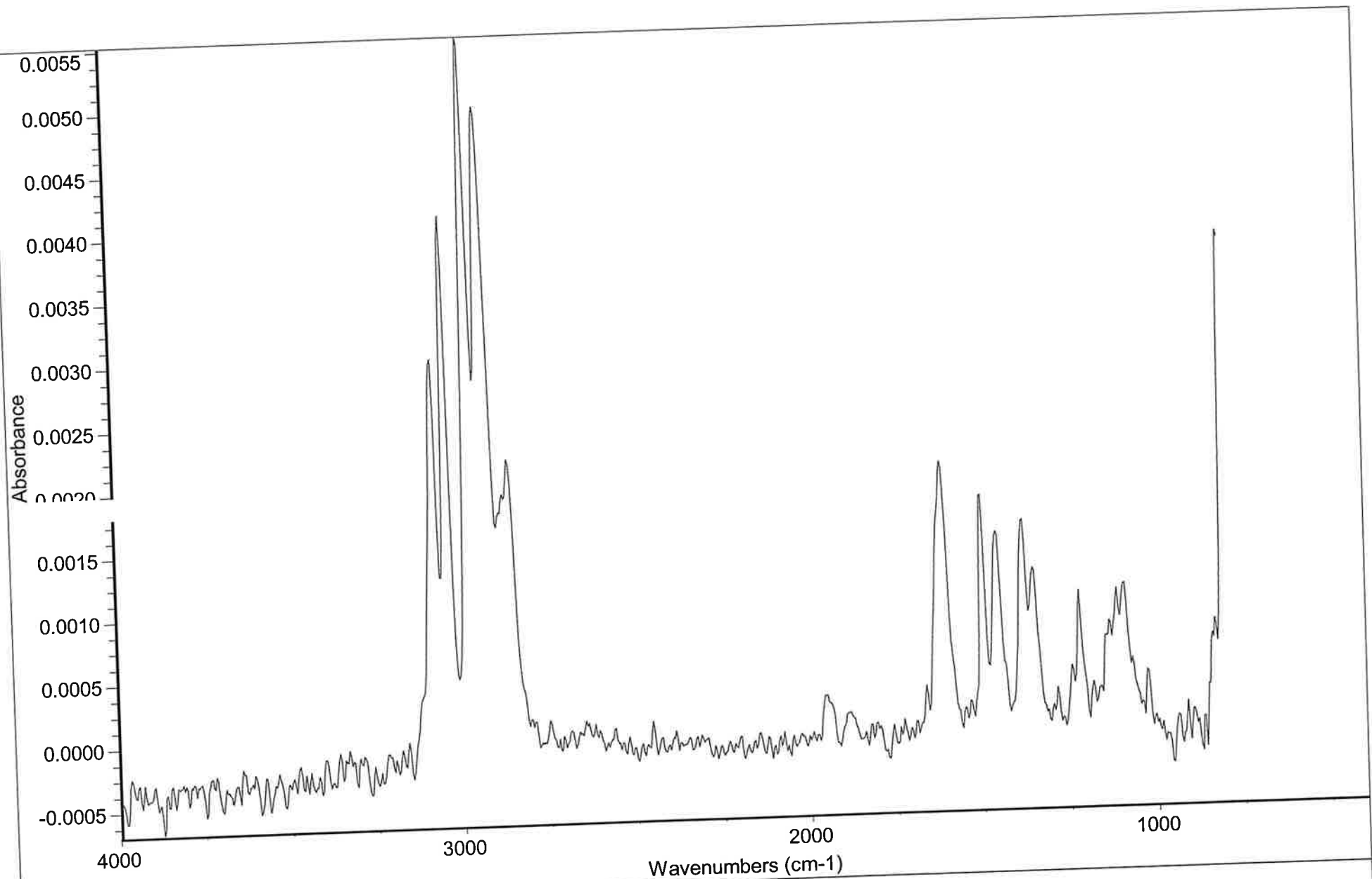


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.003 min.

Scans: 1

Resolution: 8.000



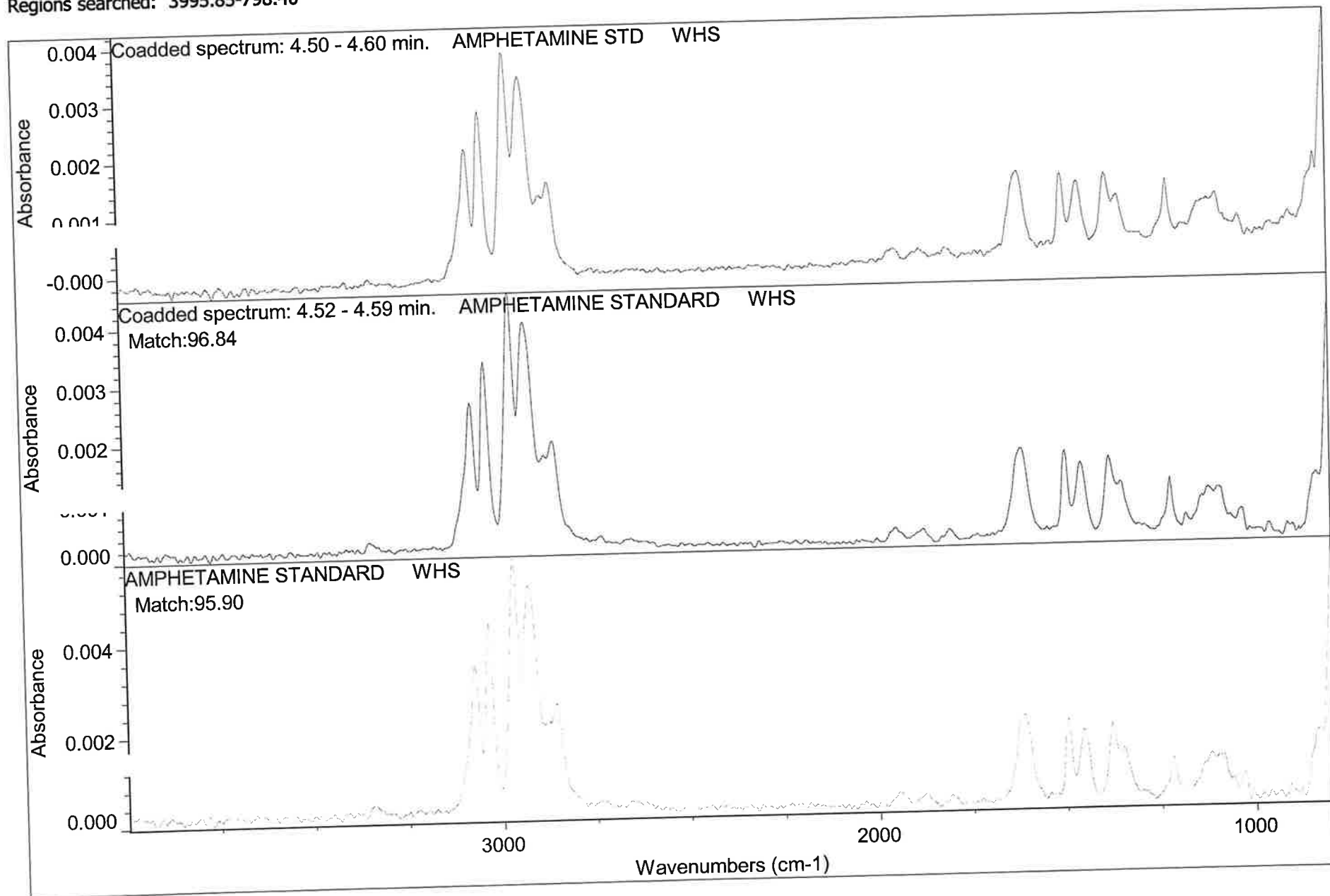
Date: Thu Jul 12 09:24:36 2001

Linked spectrum at 4.558 min. AMPHETAMINE STD WHS

Scans: 1

Resolution: 8.000

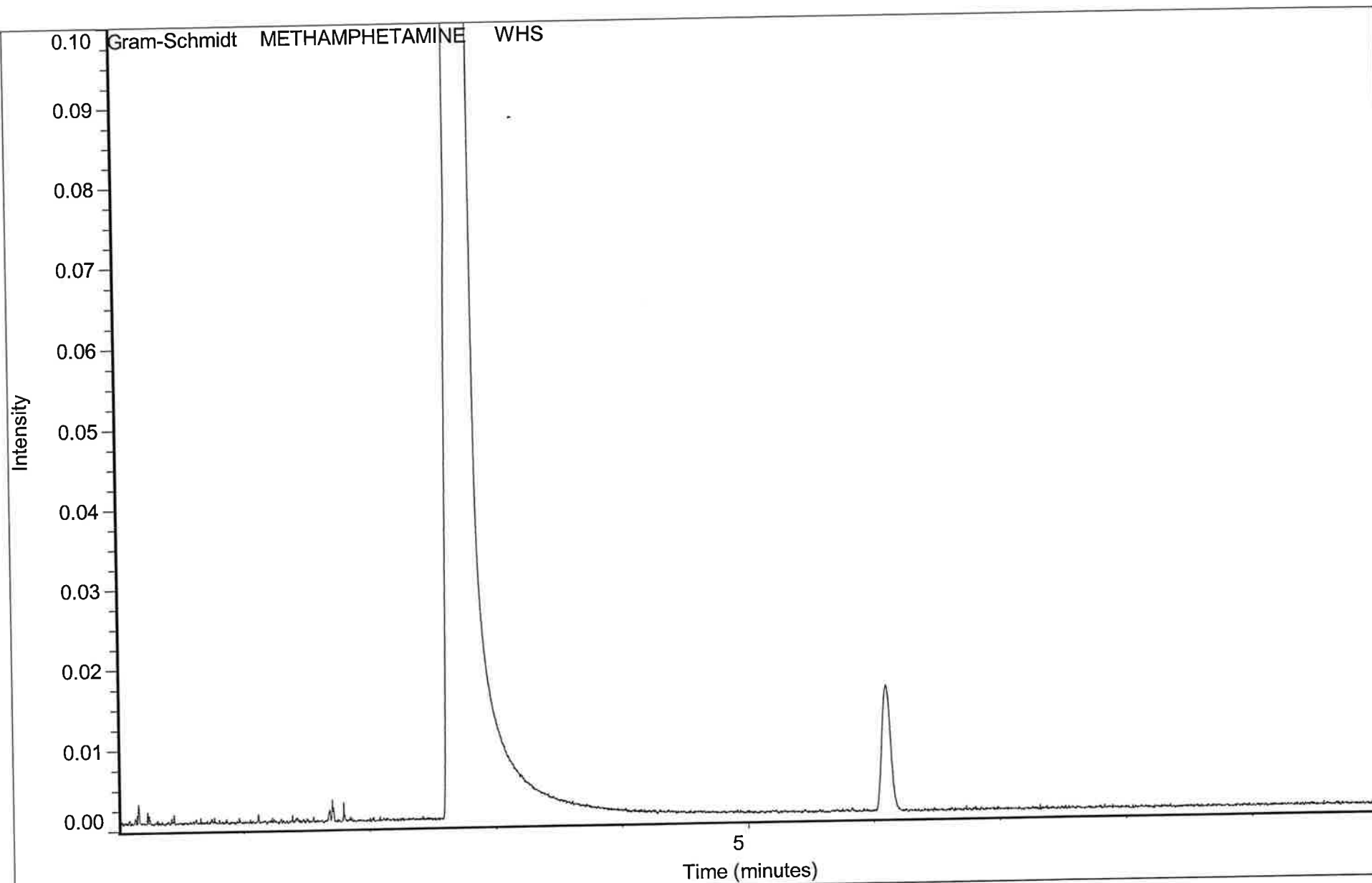
Search results for: Coadded spectrum: 4.50 - 4.60 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 10:05:39 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 4.50 - 4.60 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 10:05:39 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

		Compound Name		Library Name
Index	Match			
1	2	96.84	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	95.90	AMPHETAMINE STANDARD WHS	TEST
3	6	84.27	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	83.76	PHENTERMINE STANDARD WHS	TEST
5	4	66.30	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
6	3	66.11	METHAMPHETAMINE STANDARD WHS	Aldrich Vapor Phase Sample Library
7	4	55.29	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	58	52.61	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	74	52.05	HEPTANE, 99%	Aldrich Vapor Phase Sample Library
10	11	51.47	2,6,10,14-TETRAMETHYLPENTADECANE, 96%	

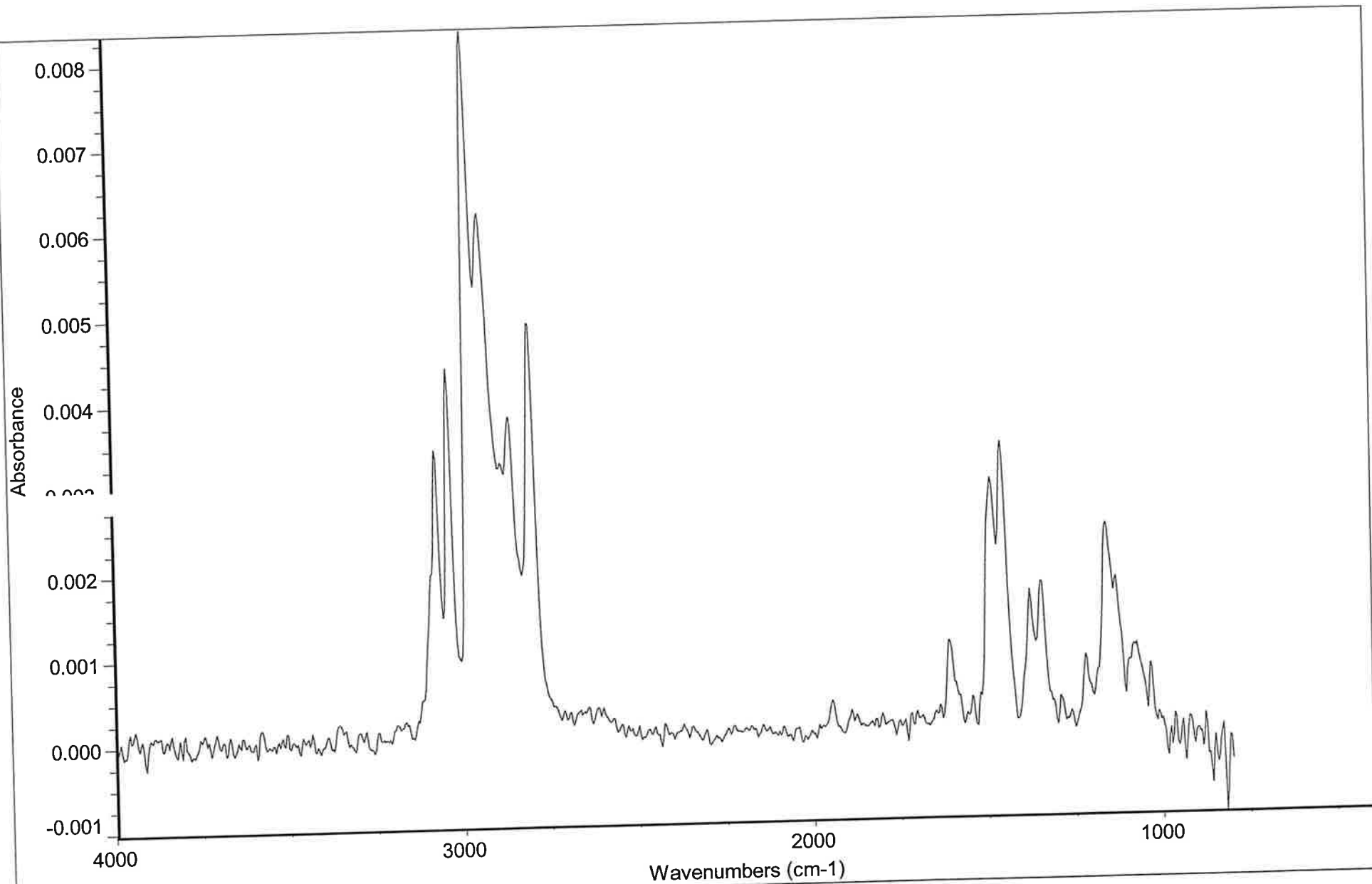


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.002 min.

Scans: 1

Resolution: 8.000

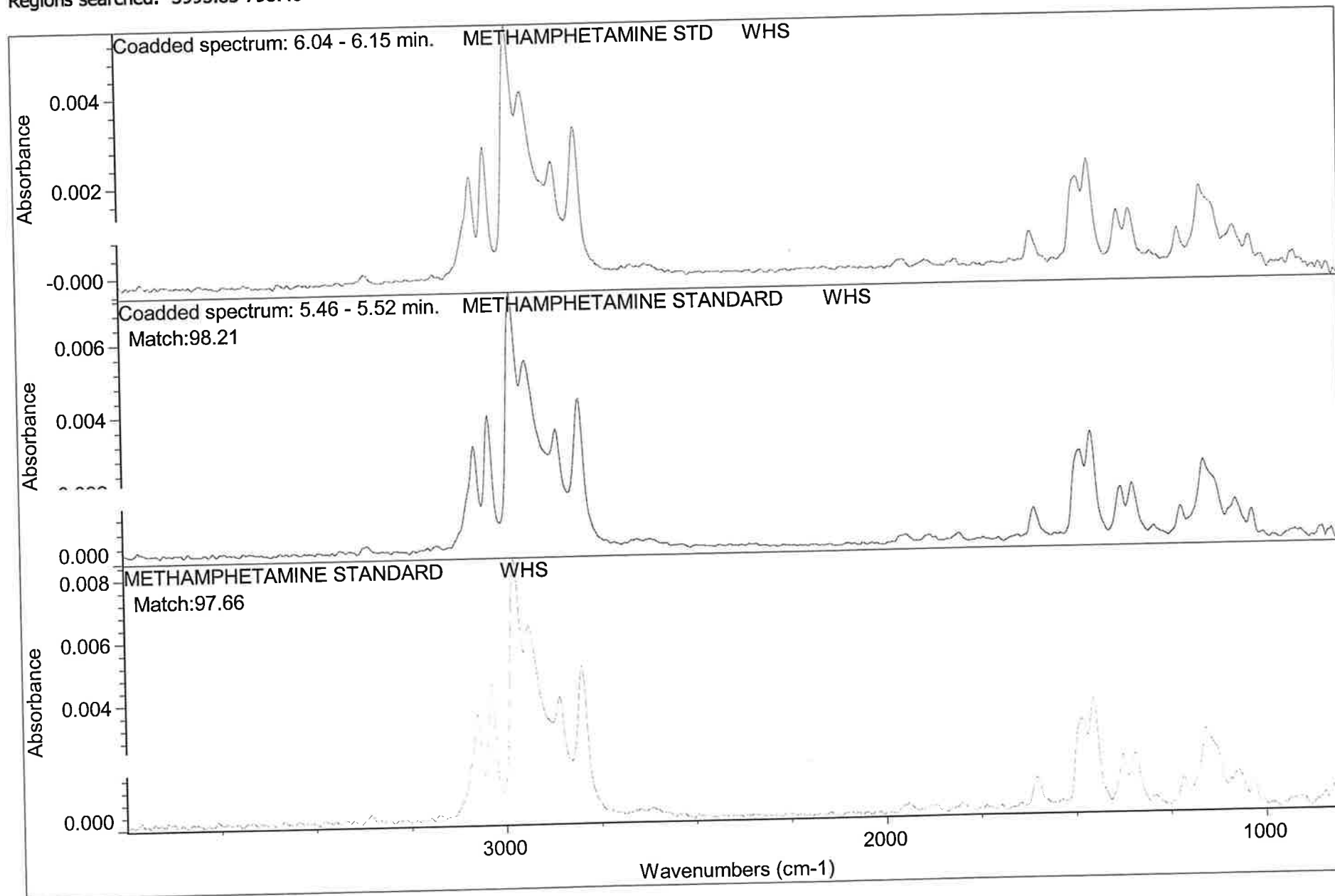


Date: Thu Jul 12 09:36:30 2001 Linked spectrum at 6.097 min. METHAMPHETAMINE STD WHS

Scans: 1

Resolution: 8.000

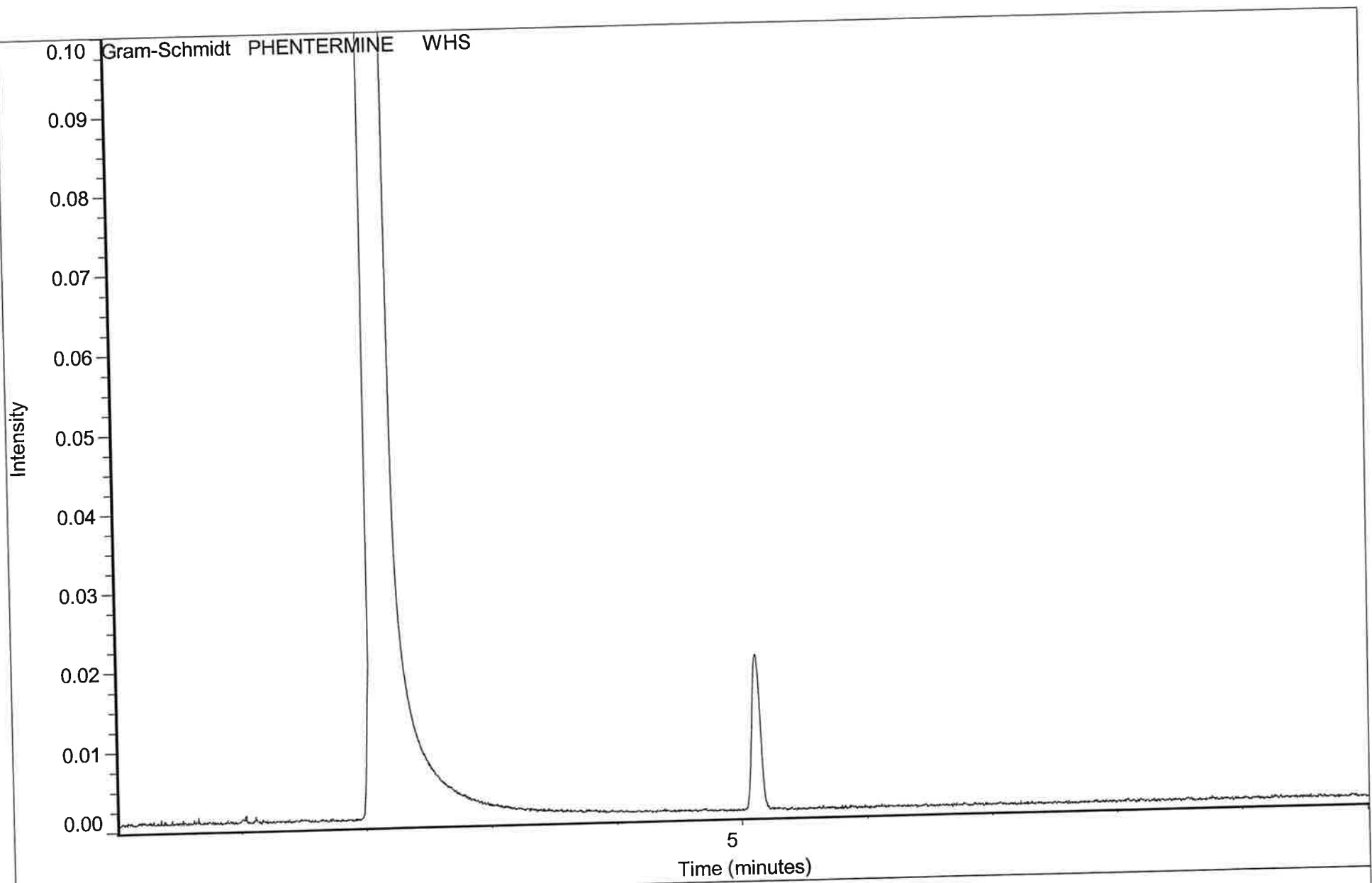
Search results for: Coadded spectrum: 6.04 - 6.15 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 10:07:13 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.04 - 6.15 min. METHAMPHETAMINE STD WHS
 Date: Thu Jul 12 10:07:13 2001
 Search algorithm: Correlation
 Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name		Library Name
1	4	98.21	Coadded spectrum: 5.46 - 5.52 min.	METHAMPHETAMINE STANDA	TEST
2	3	97.66	METHAMPHETAMINE STANDARD	WHS	TEST
3	6	69.96	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
4	5	69.53	PHENTERMINE STANDARD	WHS	TEST
5	2	66.06	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
6	1	65.48	AMPHETAMINE STANDARD	WHS	Aldrich Vapor Phase Sample Library
7	78	62.41	3-ETHYLTOLUENE, 99%		Aldrich Vapor Phase Sample Library
8	58	59.72	TERPINEN-4-OL, 95%		Aldrich Vapor Phase Sample Library
9	31	58.72	TRANS-4-OCTENE, 99%		Aldrich Vapor Phase Sample Library
10	28	58.13	DICYCLOPENTADIENE, 95%		

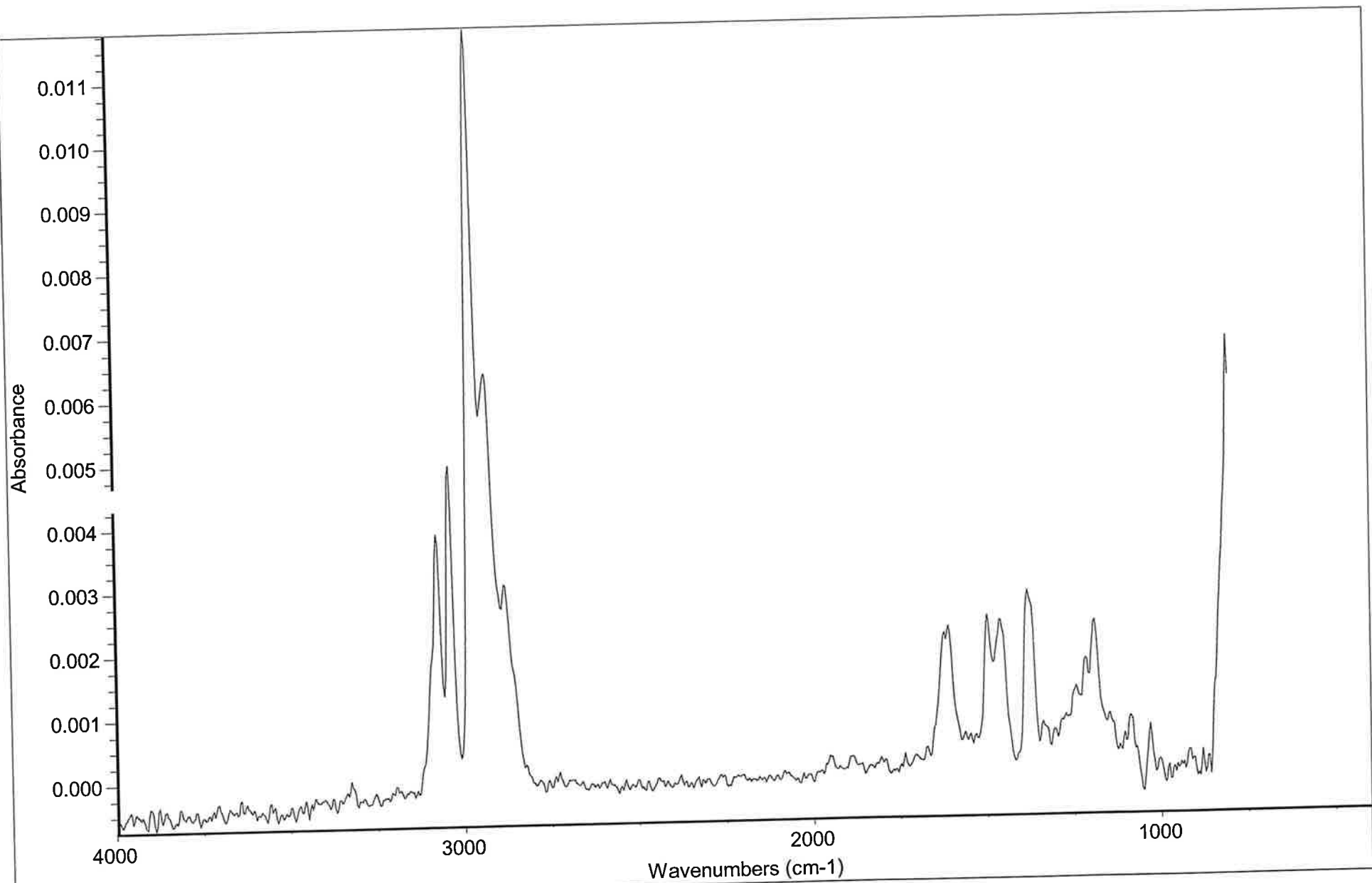


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.004 min.

Scans: 1

Resolution: 8.000



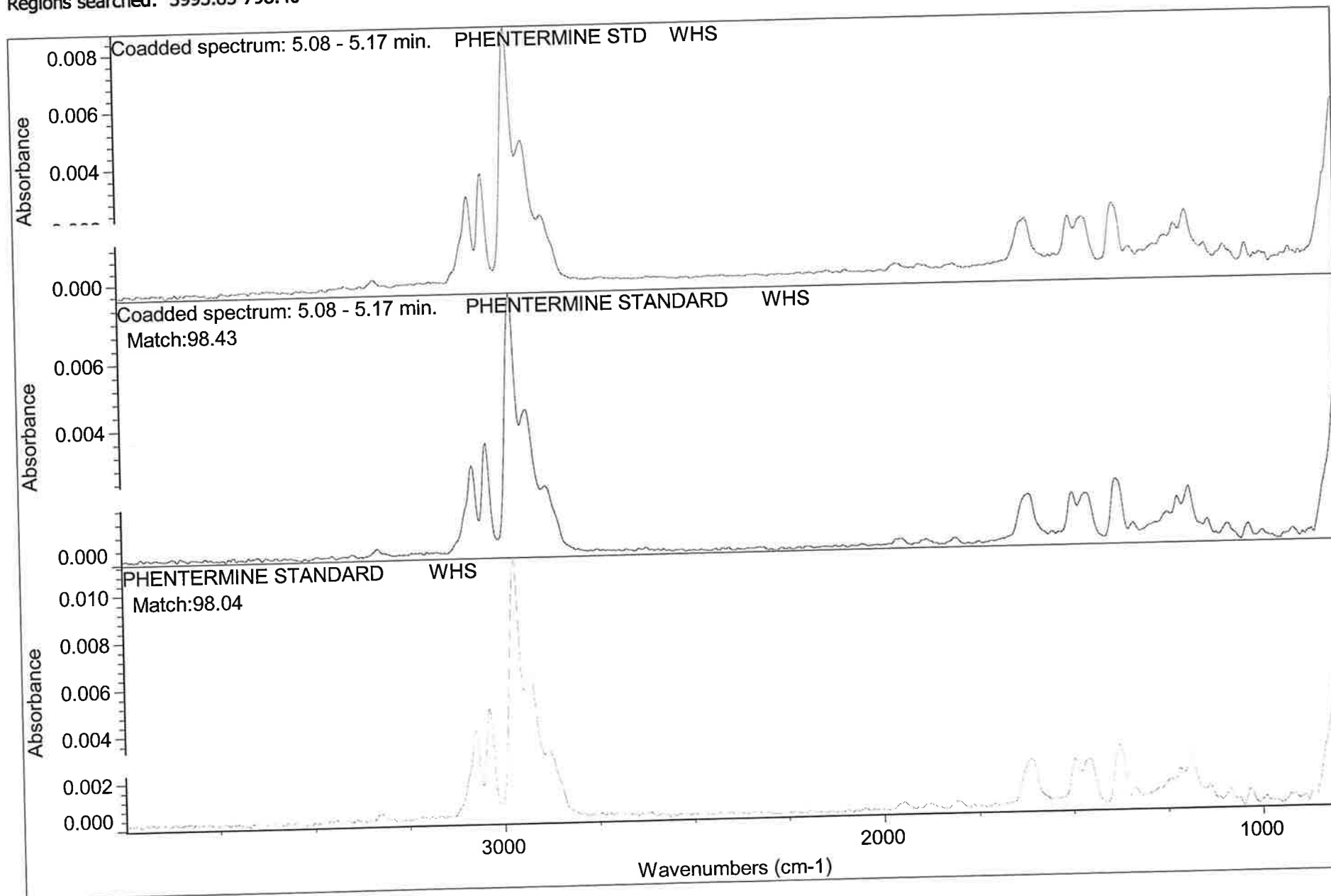
Date: Thu Jul 12 09:47:03 2001

Linked spectrum at 5.120 min. PHENTERMINE STD WHS

Scans: 1

Resolution: 8.000

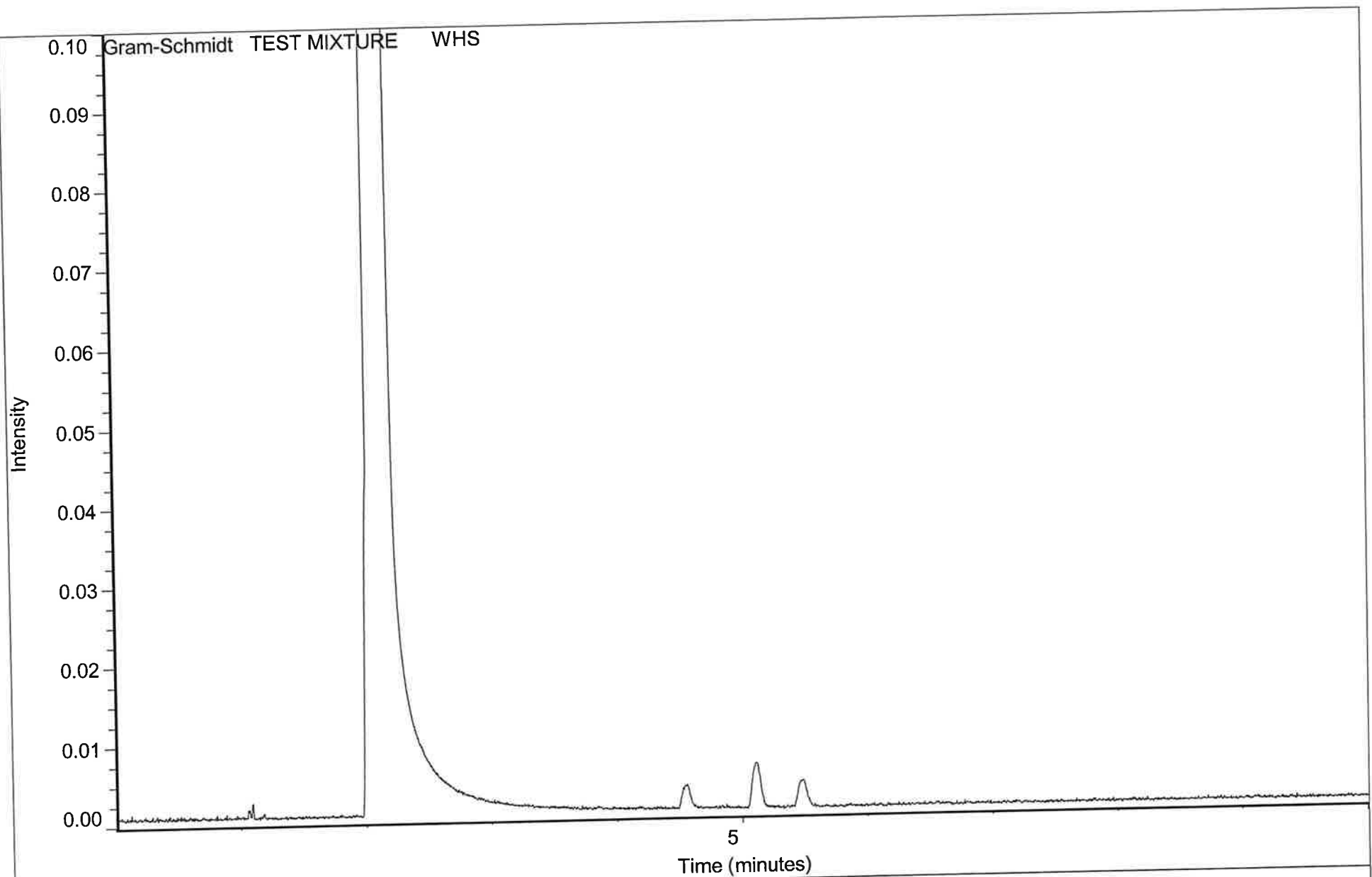
Search results for: Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STD WHS
Date: Thu Jul 12 10:09:42 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STD WHS
Date: Thu Jul 12 10:09:42 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name		Library Name
1	6	98.43	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
2	5	98.04	PHENTERMINE STANDARD WHS		TEST
3	2	84.90	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
4	1	84.52	AMPHETAMINE STANDARD WHS		TEST
5	4	78.86	TERT-BUTYLBENZENE, 99%		Aldrich Vapor Phase Sample Library
6	74	76.19	HEPTANE, 99%		Aldrich Vapor Phase Sample Library
7	23	71.70	2,4-DIMETHYL-3-PENTANOL, 99%		Aldrich Vapor Phase Sample Library
8	64	70.73	ISOBUTYLAMINE, 99%		Aldrich Vapor Phase Sample Library
9	4	70.39	Coadded spectrum: 5.46 - 5.52 min.	METHAMPHETAMINE STANDA	TEST
10	3	70.35	METHAMPHETAMINE STANDARD	WHS	TEST

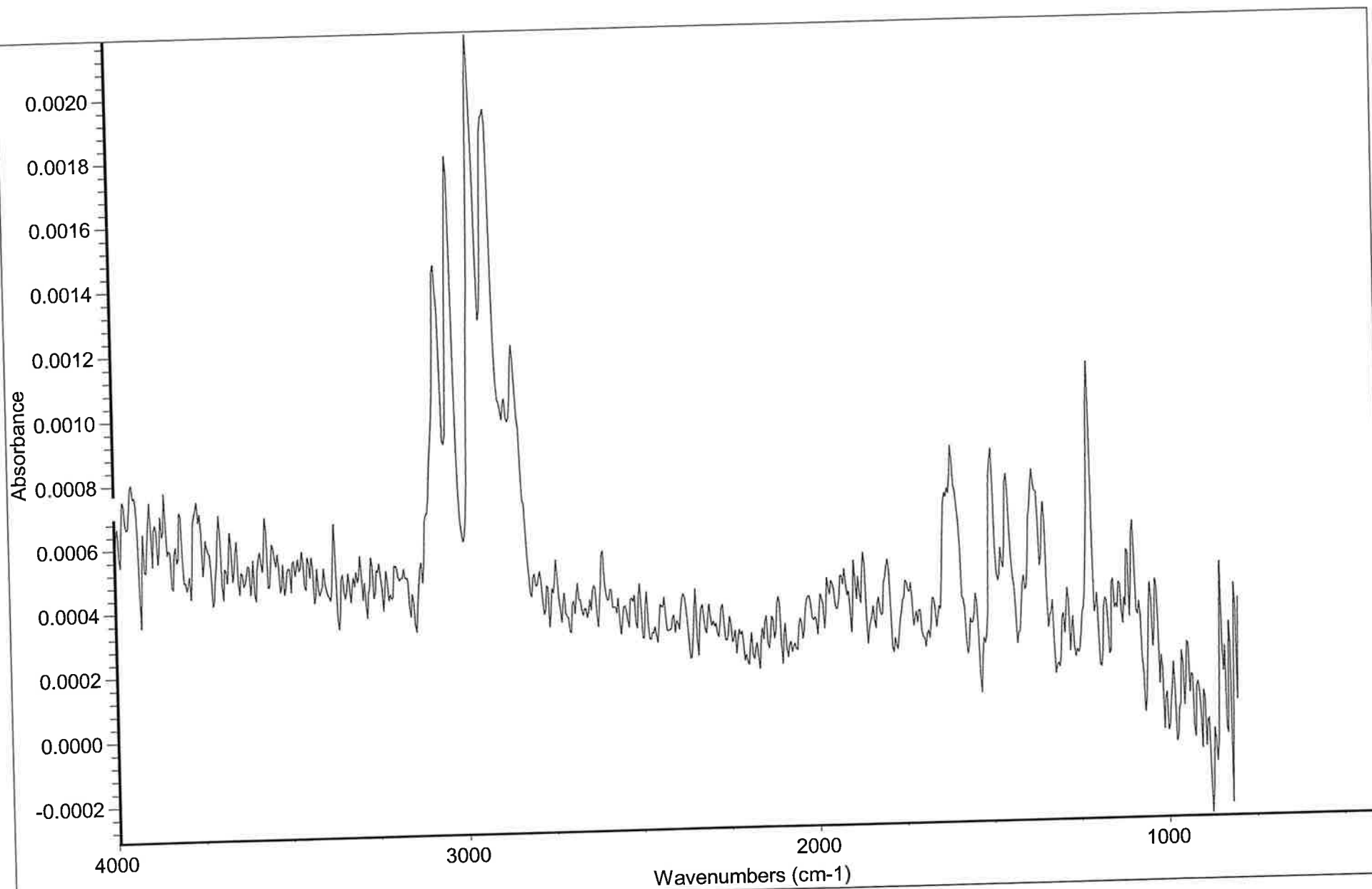


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.002 min.

Scans: 1

Resolution: 8.000



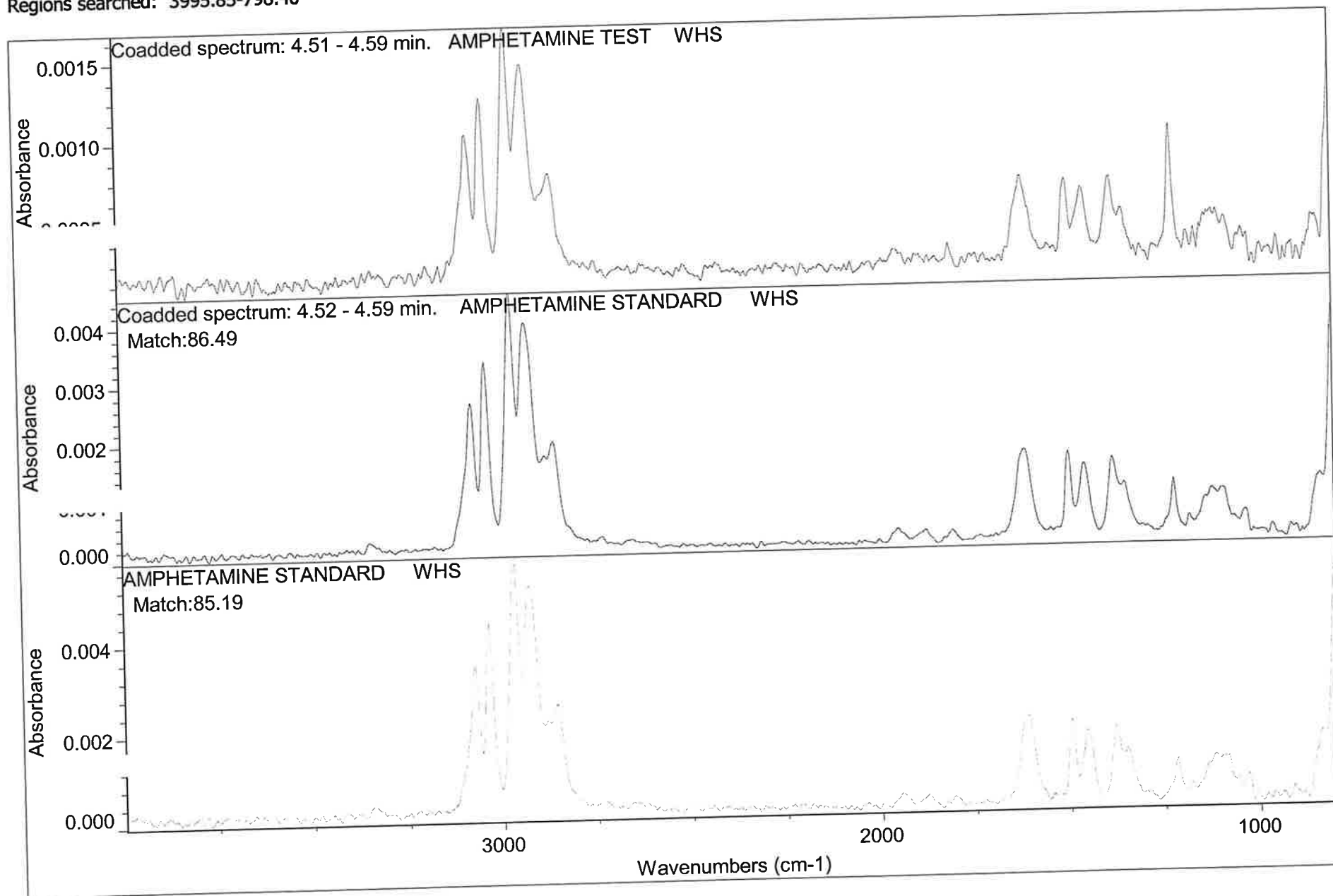
Date: Thu Jul 12 09:57:16 2001

Linked spectrum at 4.561 min. AMPHETAMINE TEST WHS

Scans: 1

Resolution: 8.000

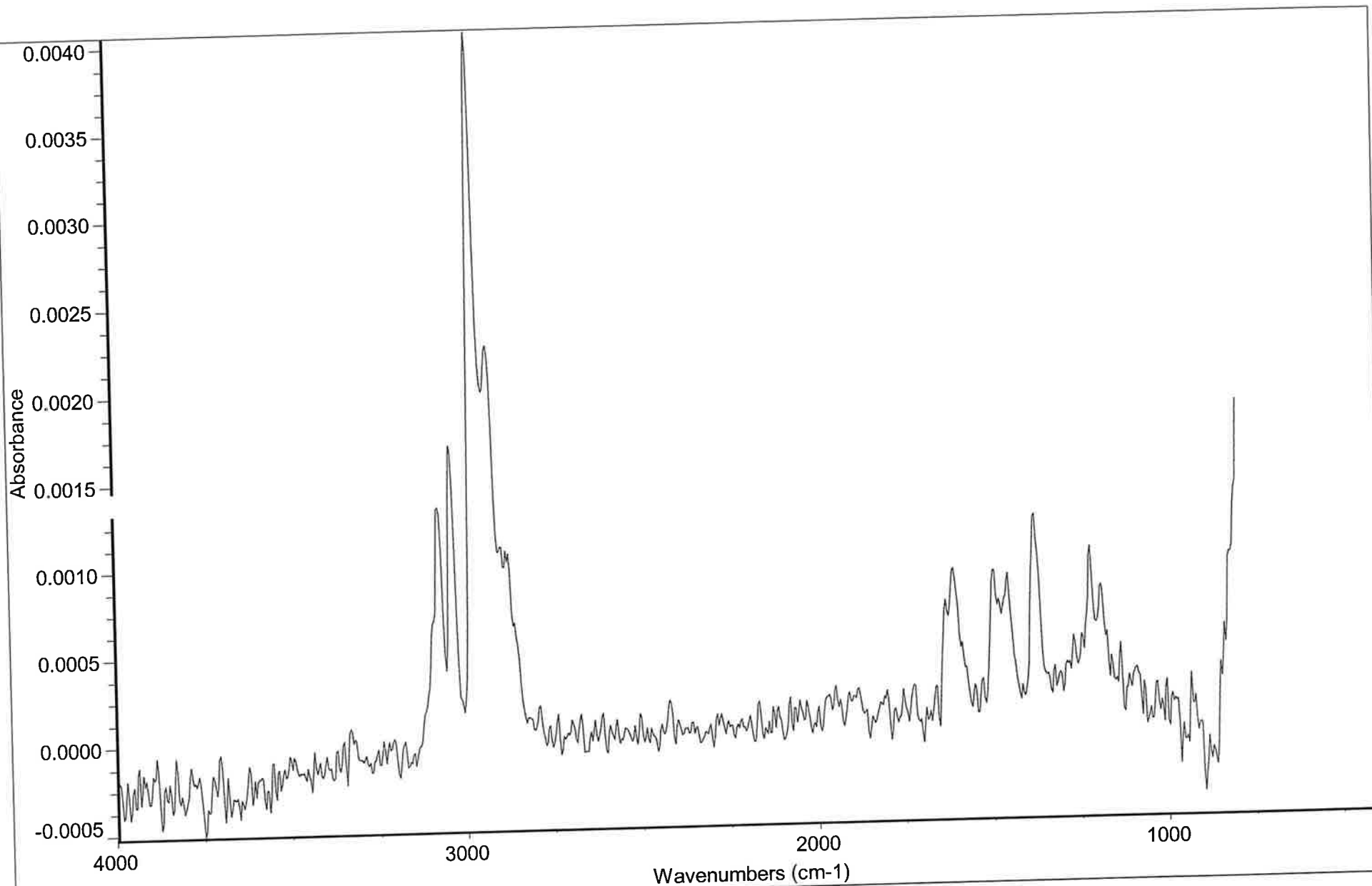
Search results for: Coadded spectrum: 4.51 - 4.59 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 10:11:09 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 4.51 - 4.59 min. AMPHETAMINE TEST WHS
Date: Thu Jul 12 10:11:09 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	2	86.49	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	85.19	AMPHETAMINE STANDARD WHS	TEST
3	6	74.40	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	73.06	PHENTERMINE STANDARD WHS	TEST
5	3	59.69	METHAMPHETAMINE STANDARD WHS	TEST
6	4	59.53	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	Aldrich Vapor Phase Sample Library
7	4	53.34	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	58	51.02	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	74	49.39	HEPTANE, 99%	Aldrich Vapor Phase Sample Library
10	31	48.20	TRANS-4-OCTENE, 99%	



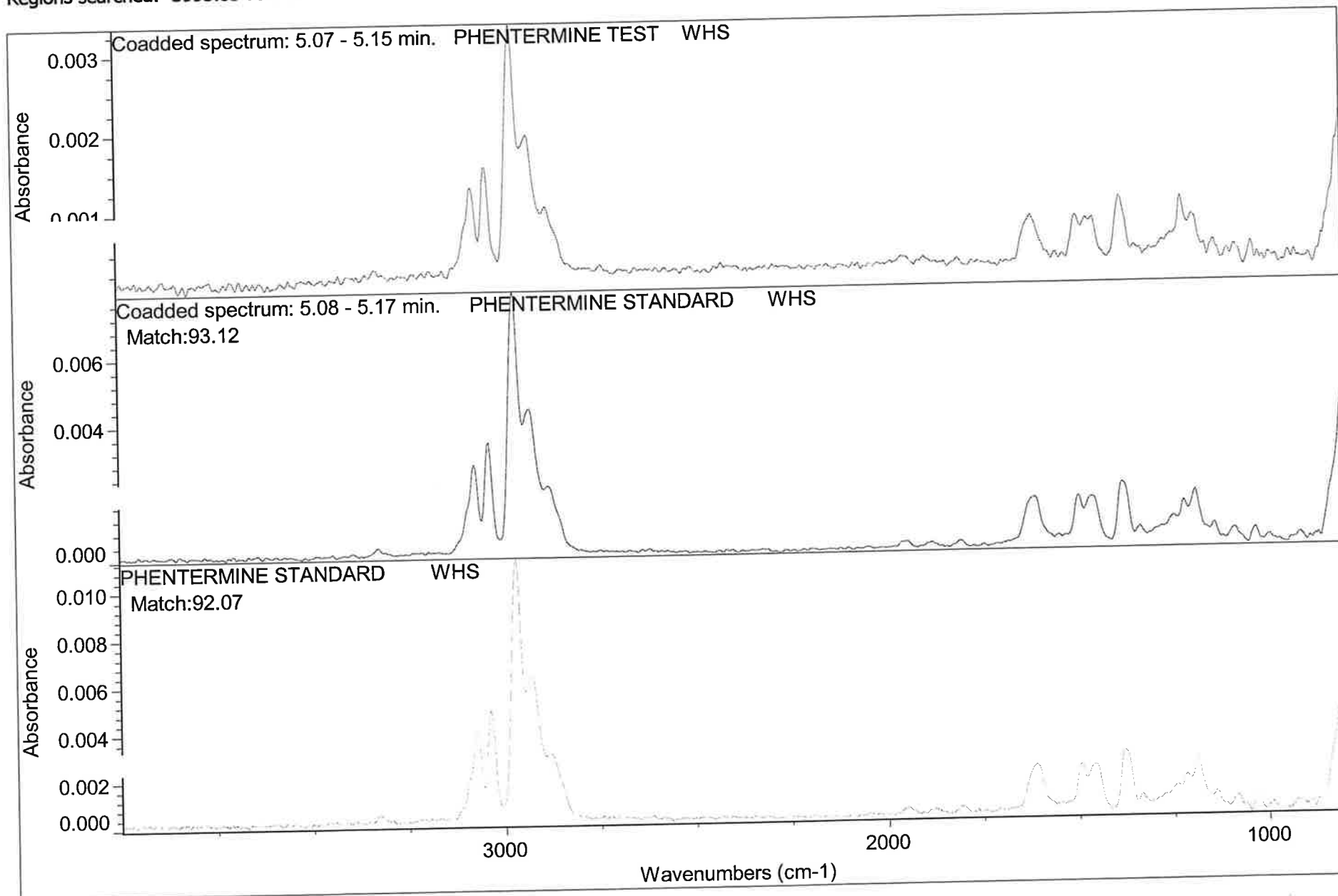
Date: Thu Jul 12 09:57:49 2001

Linked spectrum at 5.116 min. PHENTERMINE TEST WHS

Scans: 1

Resolution: 8.000

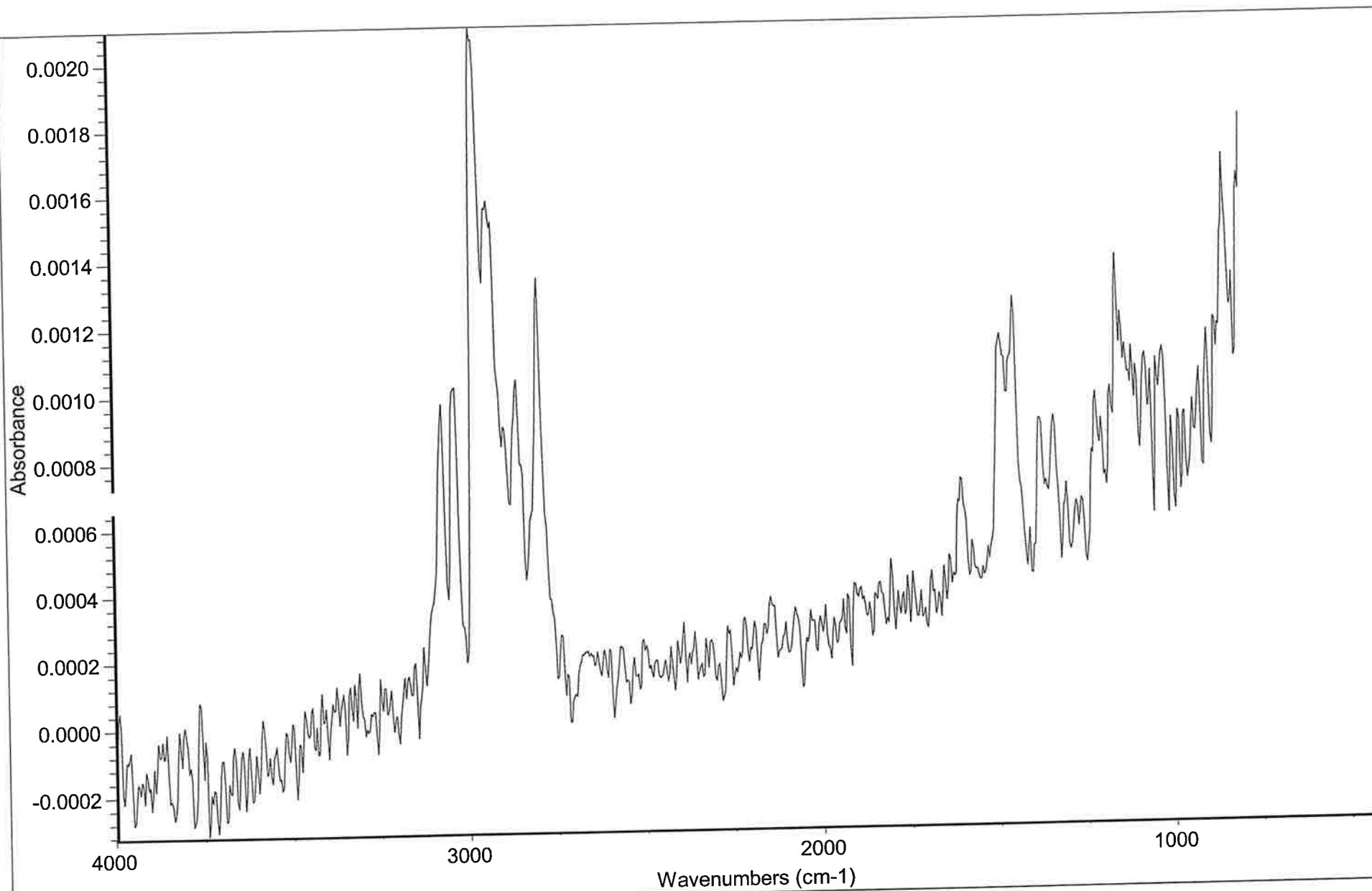
Search results for: Coadded spectrum: 5.07 - 5.15 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 10:12:14 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.07 - 5.15 min. PHENTERMINE TEST WHS
Date: Thu Jul 12 10:12:14 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	6	93.12	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
2	5	92.07	PHENTERMINE STANDARD WHS	TEST
3	2	81.55	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
4	1	81.52	AMPHETAMINE STANDARD WHS	TEST
5	4	77.54	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
6	74	74.69	HEPTANE, 99%	Aldrich Vapor Phase Sample Library
7	23	70.26	2,4-DIMETHYL-3-PENTANOL, 99%	Aldrich Vapor Phase Sample Library
8	64	69.46	ISOBUTYLAMINE, 99%	Aldrich Vapor Phase Sample Library
9	4	67.88	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
10	3	67.83	METHAMPHETAMINE STANDARD WHS	TEST



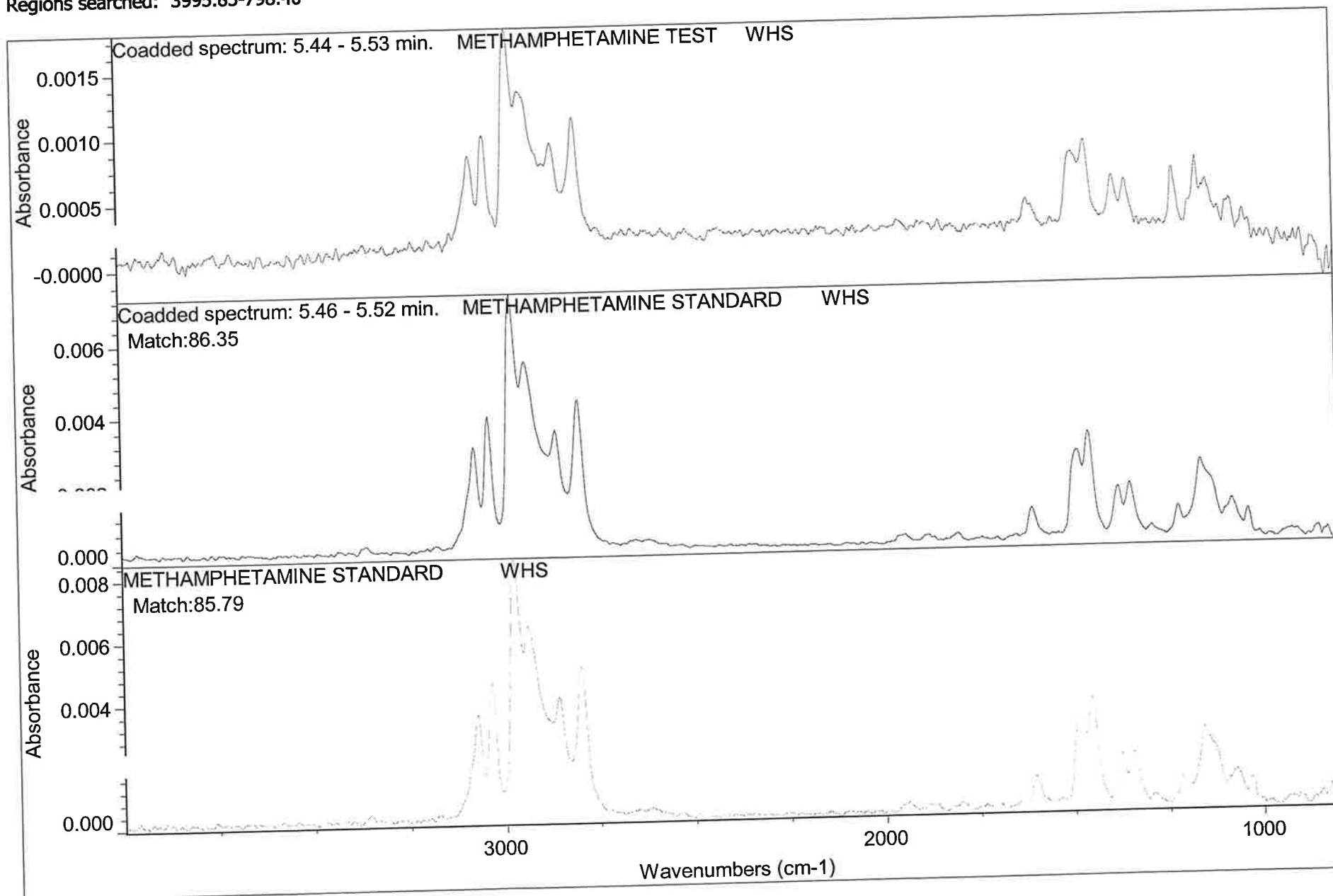
Date: Thu Jul 12 09:58:12 2001

Linked spectrum at 5.486 min. METHAMPHETAMINE TEST WHS

Scans: 1

Resolution: 8.000

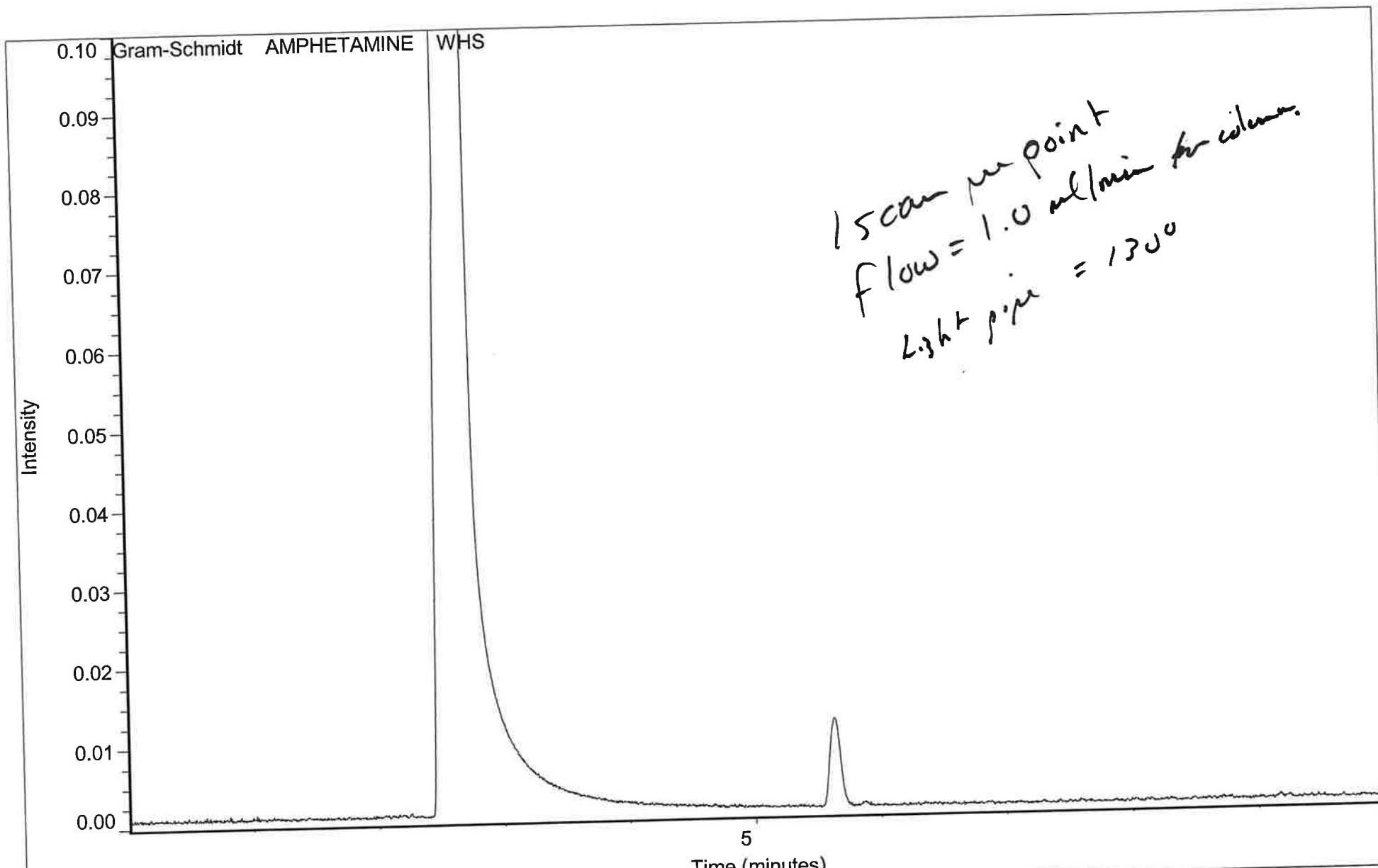
Search results for: Coadded spectrum: 5.44 - 5.53 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 10:13:19 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.44 - 5.53 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 10:13:19 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	86.35	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	85.79	METHAMPHETAMINE STANDARD WHS	TEST
3	6	62.06	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	60.73	PHENTERMINE STANDARD WHS	TEST
5	1	60.34	AMPHETAMINE STANDARD WHS	TEST
6	2	60.16	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	Aldrich Vapor Phase Sample Library
7	78	59.66	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
8	58	59.55	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	31	56.47	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library
10	28	56.31	DICYCLOPENTADIENE, 95%	

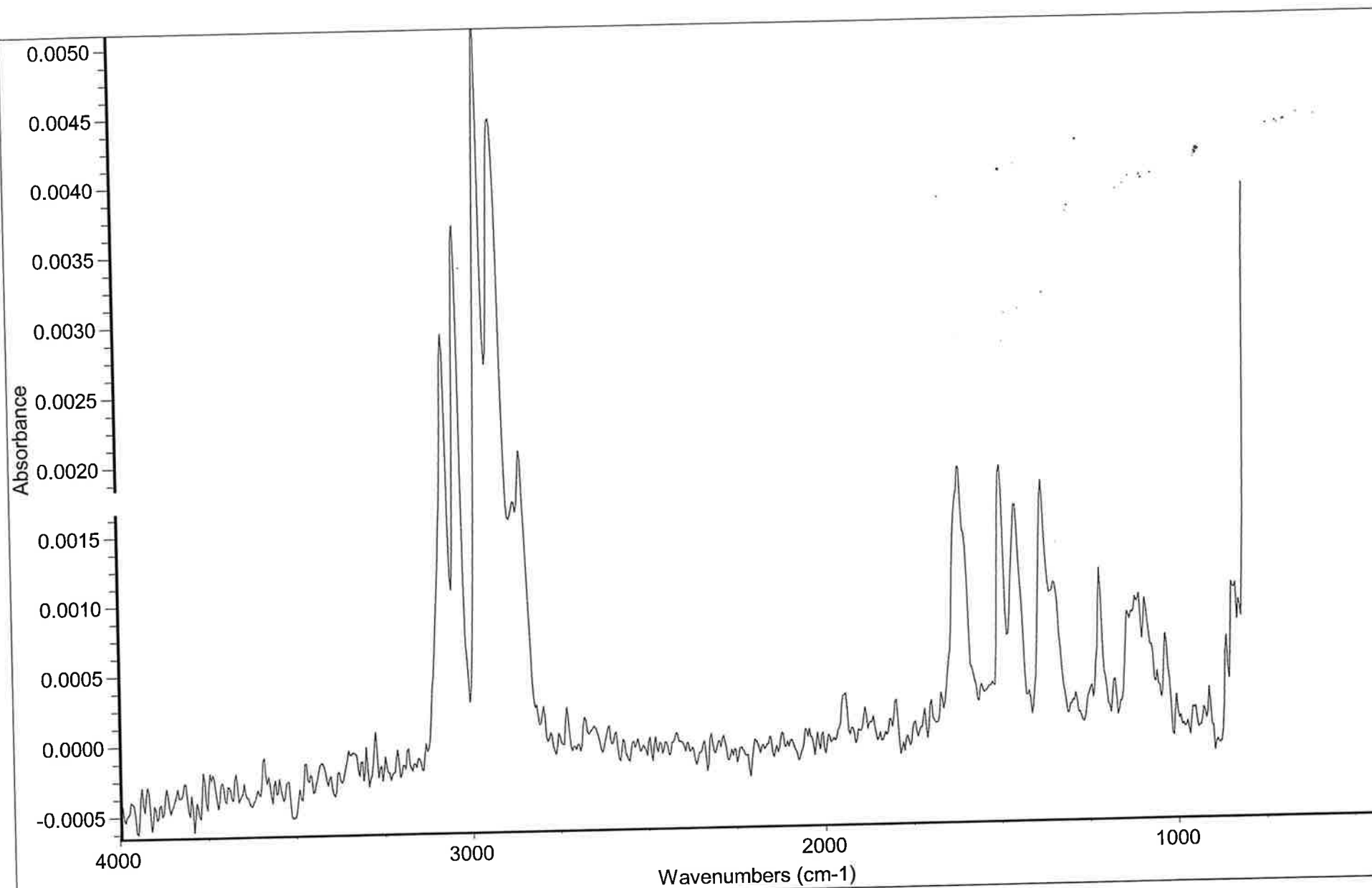


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.001 min.

Scans: 1

Resolution: 8.000



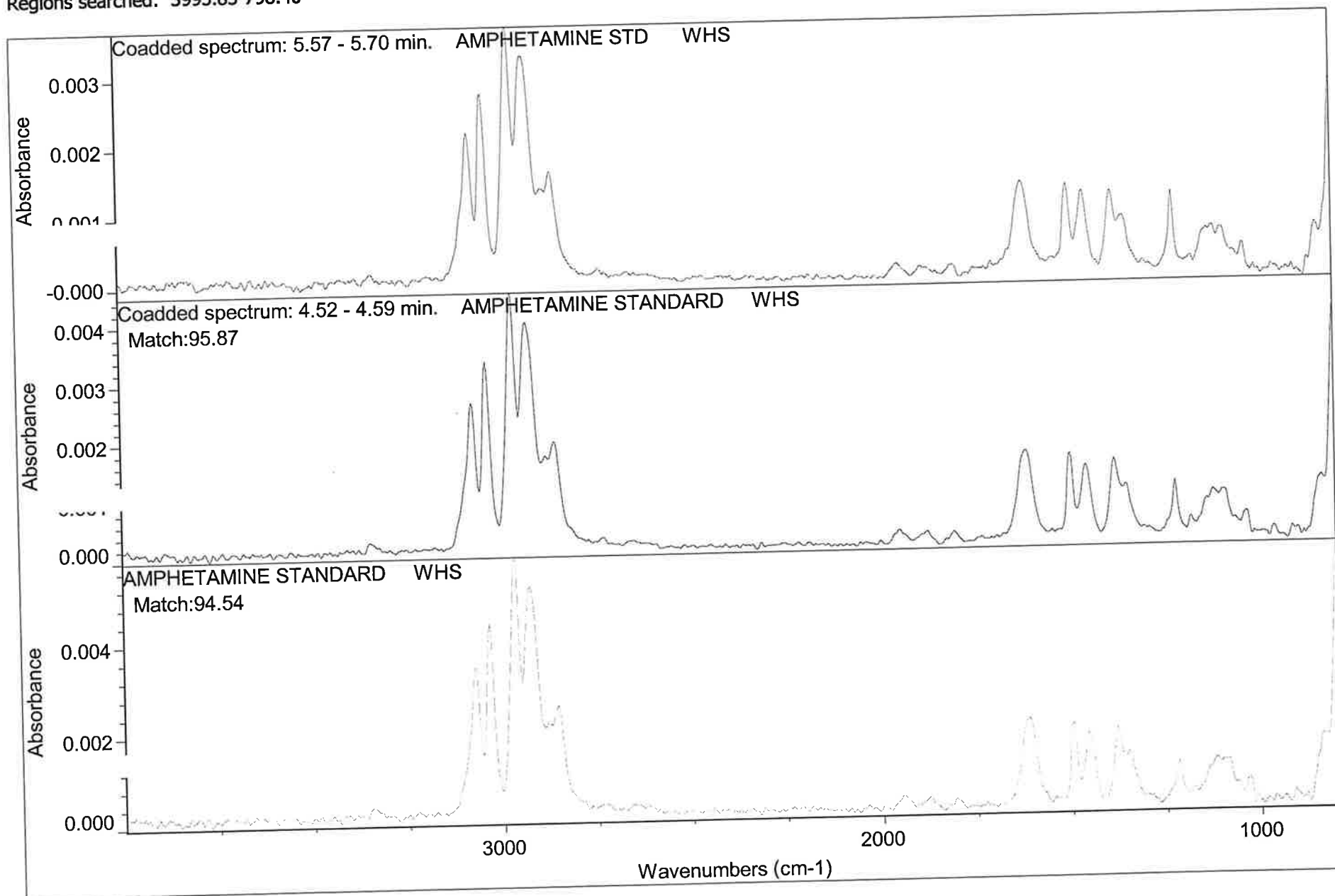
Date: Thu Jul 12 10:21:19 2001

Linked spectrum at 5.633 min. AMPHETAMINE STD WHS

Scans: 1

Resolution: 8.000

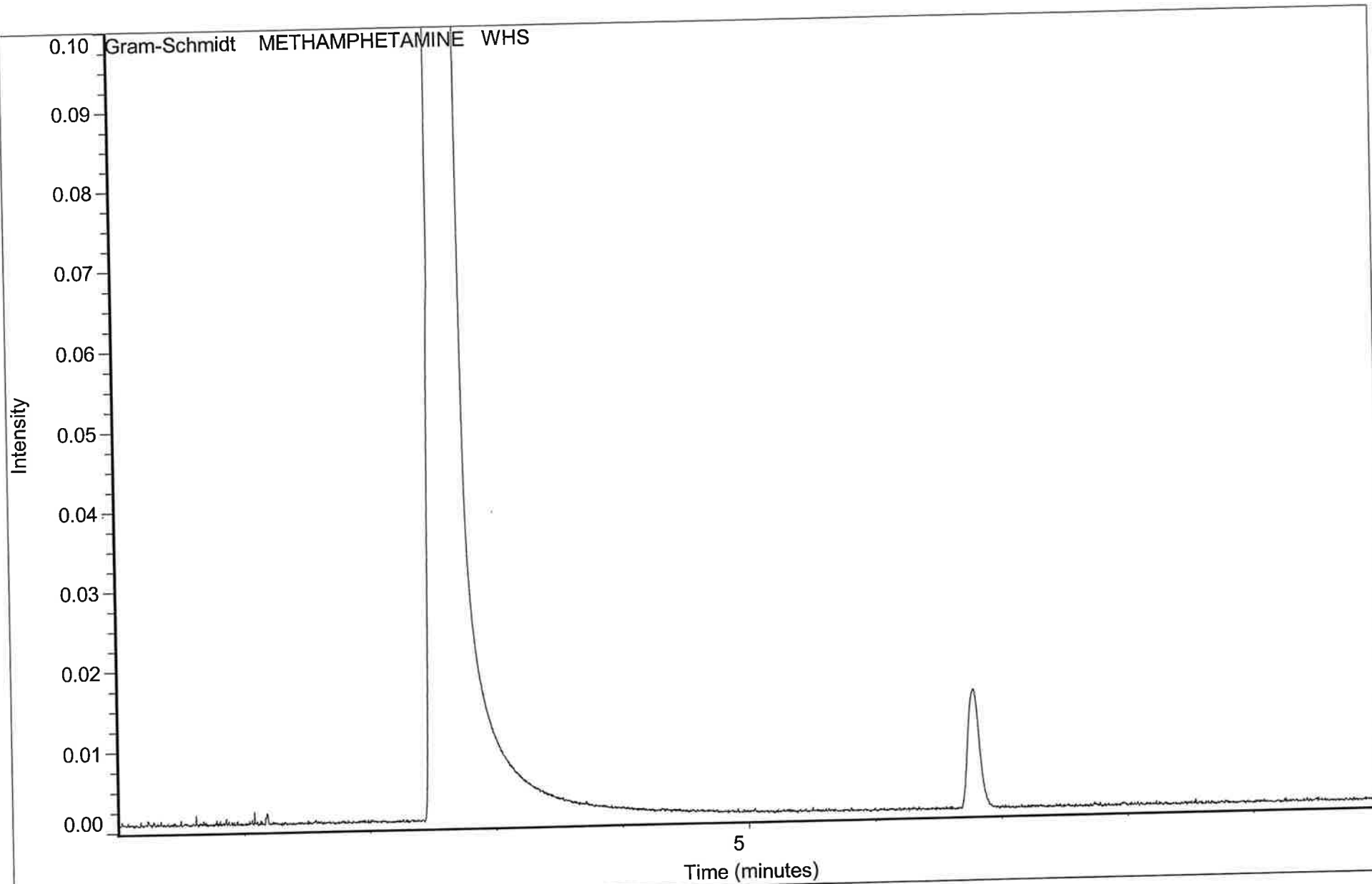
Search results for: Coadded spectrum: 5.57 - 5.70 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 11:10:53 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.57 - 5.70 min. AMPHETAMINE STD WHS
 Date: Thu Jul 12 11:10:53 2001
 Search algorithm: Correlation
 Regions searched: 3995.85-798.40

Search results list of matches

Index		Match	Compound Name	Library Name
1	2	95.87	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	94.54	AMPHETAMINE STANDARD WHS	TEST
3	6	83.00	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	82.24	PHENTERMINE STANDARD WHS	TEST
5	3	67.06	METHAMPHETAMINE STANDARD WHS	TEST
6	4	66.63	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	Aldrich Vapor Phase Sample Library
7	4	55.92	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	58	53.23	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	11	52.68	2,6,10,14-TETRAMETHYLPENTADECANE, 96%	Aldrich Vapor Phase Sample Library
10	74	52.66	HEPTANE, 99%	

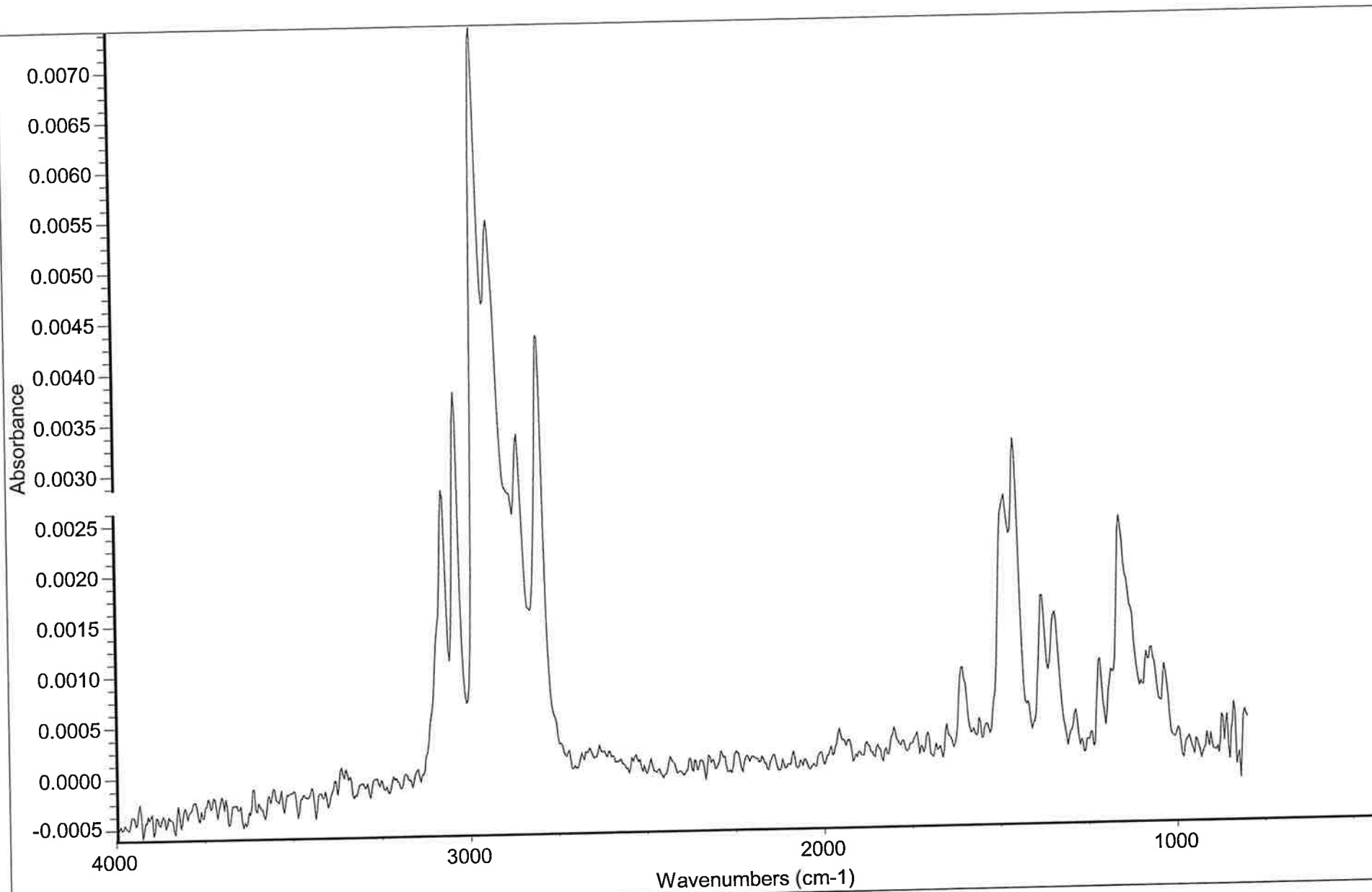


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.000 min.

Scans: 1

Resolution: 8.000



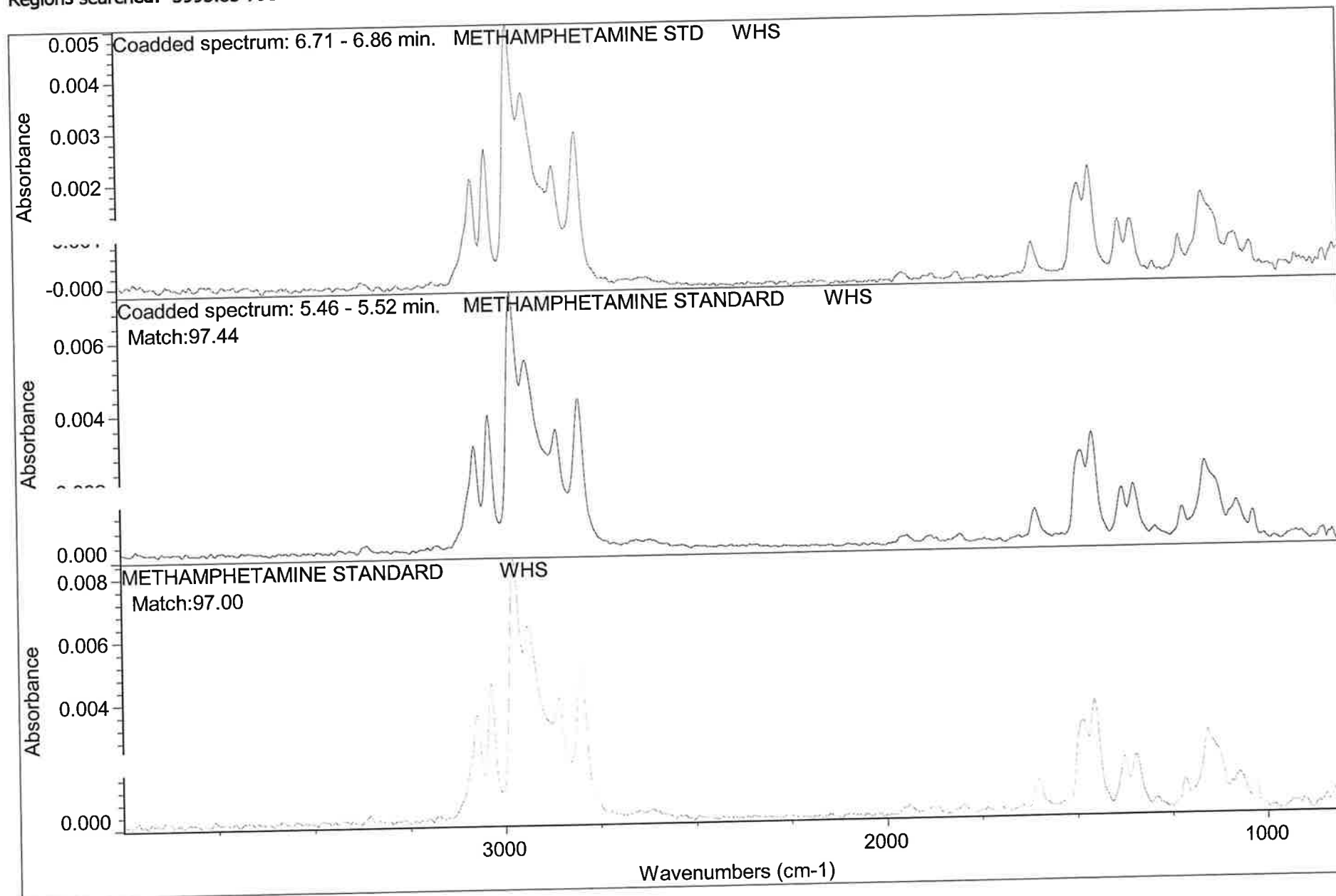
Date: Thu Jul 12 10:33:19 2001

Linked spectrum at 6.781 min. METHAMPHETAMINE STD WHS

Scans: 1

Resolution: 8.000

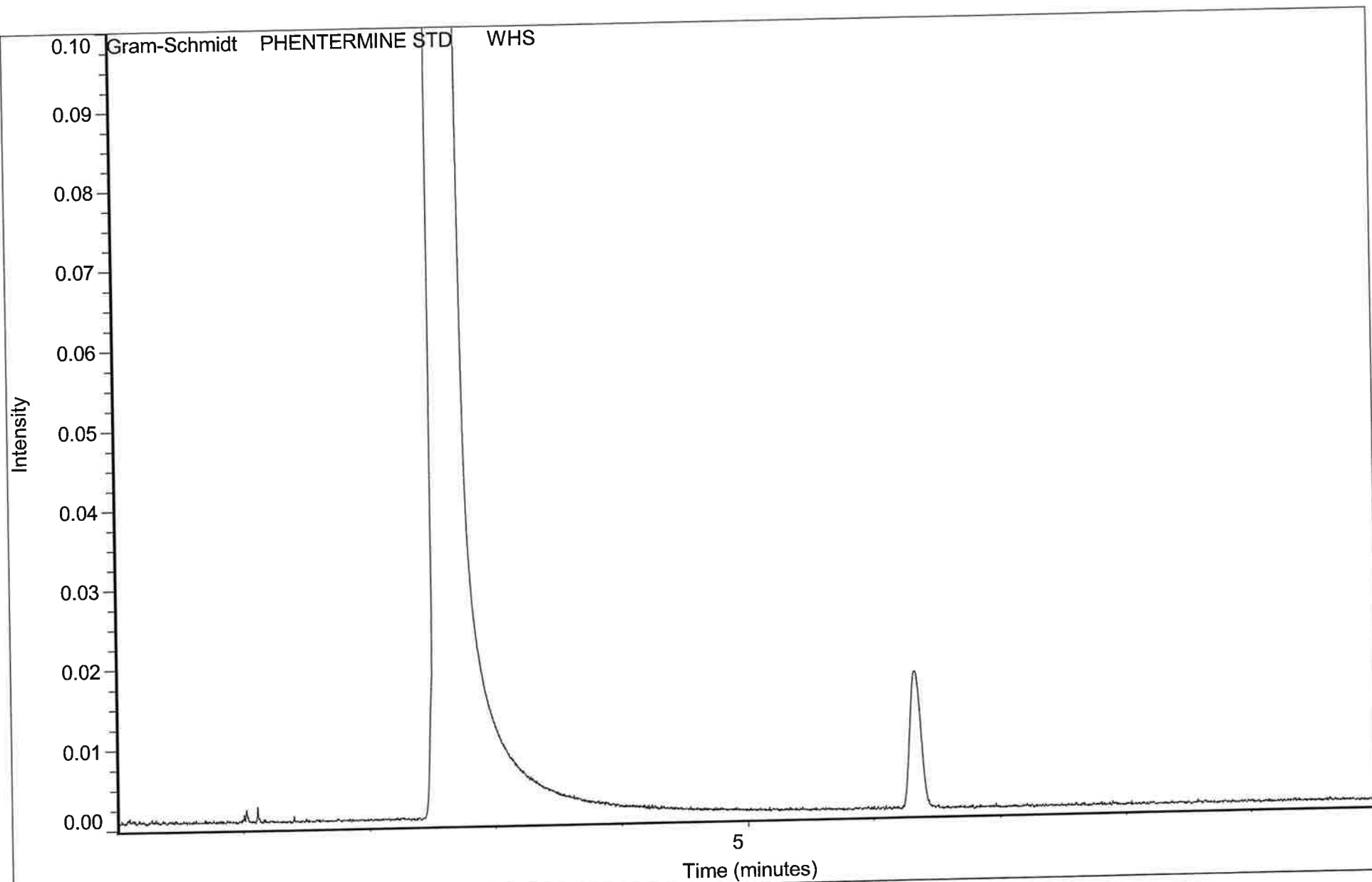
Search results for: Coadded spectrum: 6.71 - 6.86 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 11:12:35 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.71 - 6.86 min. METHAMPHETAMINE STD WHS
Date: Thu Jul 12 11:12:35 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name	Library Name
1	4	97.44	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	97.00	METHAMPHETAMINE STANDARD WHS	TEST
3	6	70.59	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	70.02	PHENTERMINE STANDARD WHS	TEST
5	2	66.16	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
6	1	65.62	AMPHETAMINE STANDARD WHS	TEST
7	78	61.72	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
8	58	59.05	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	28	57.77	DICYCLOPENTADIENE, 95%	Aldrich Vapor Phase Sample Library
10	31	57.74	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library

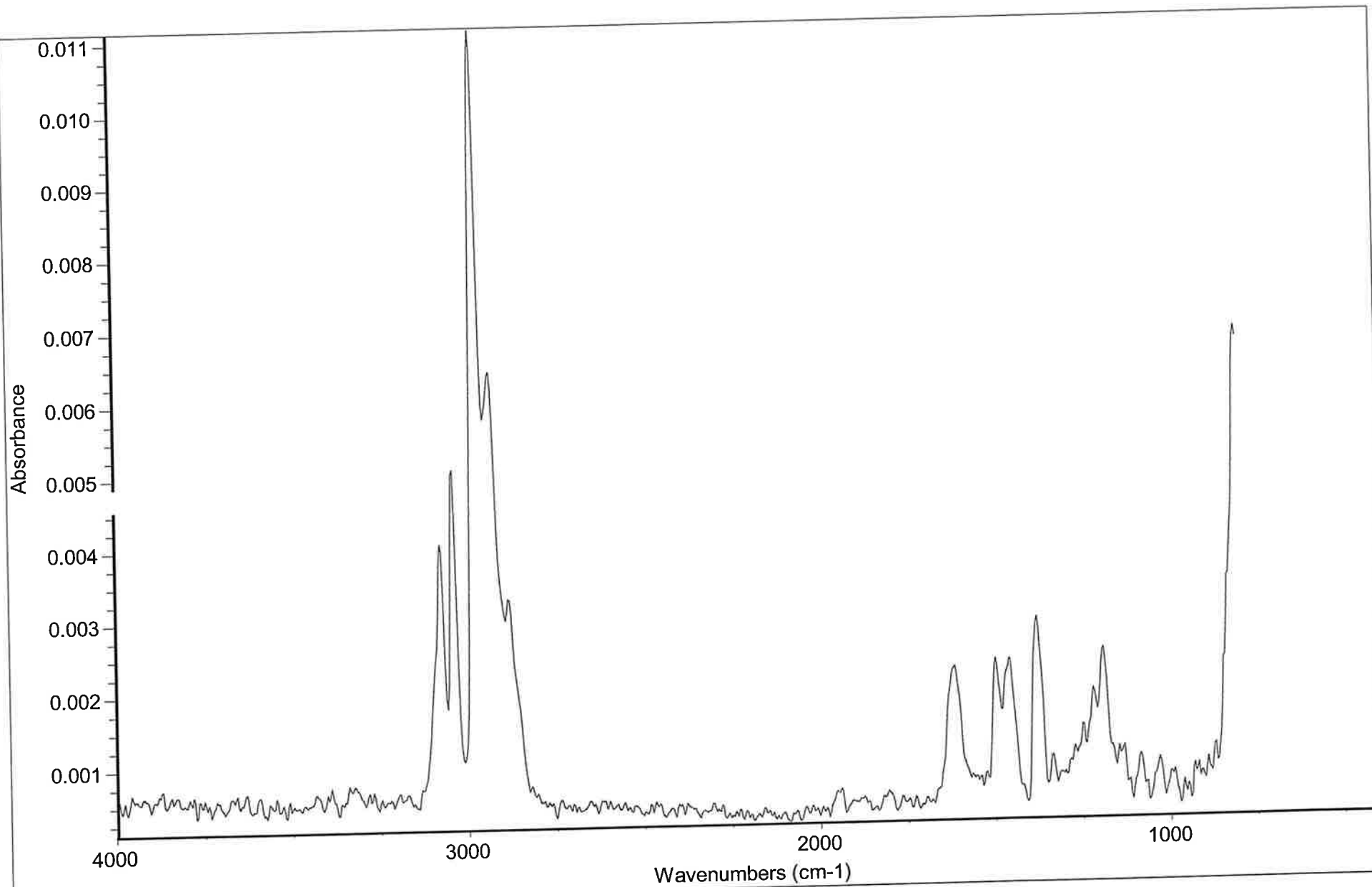


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.001 min.

Scans: 1

Resolution: 8.000



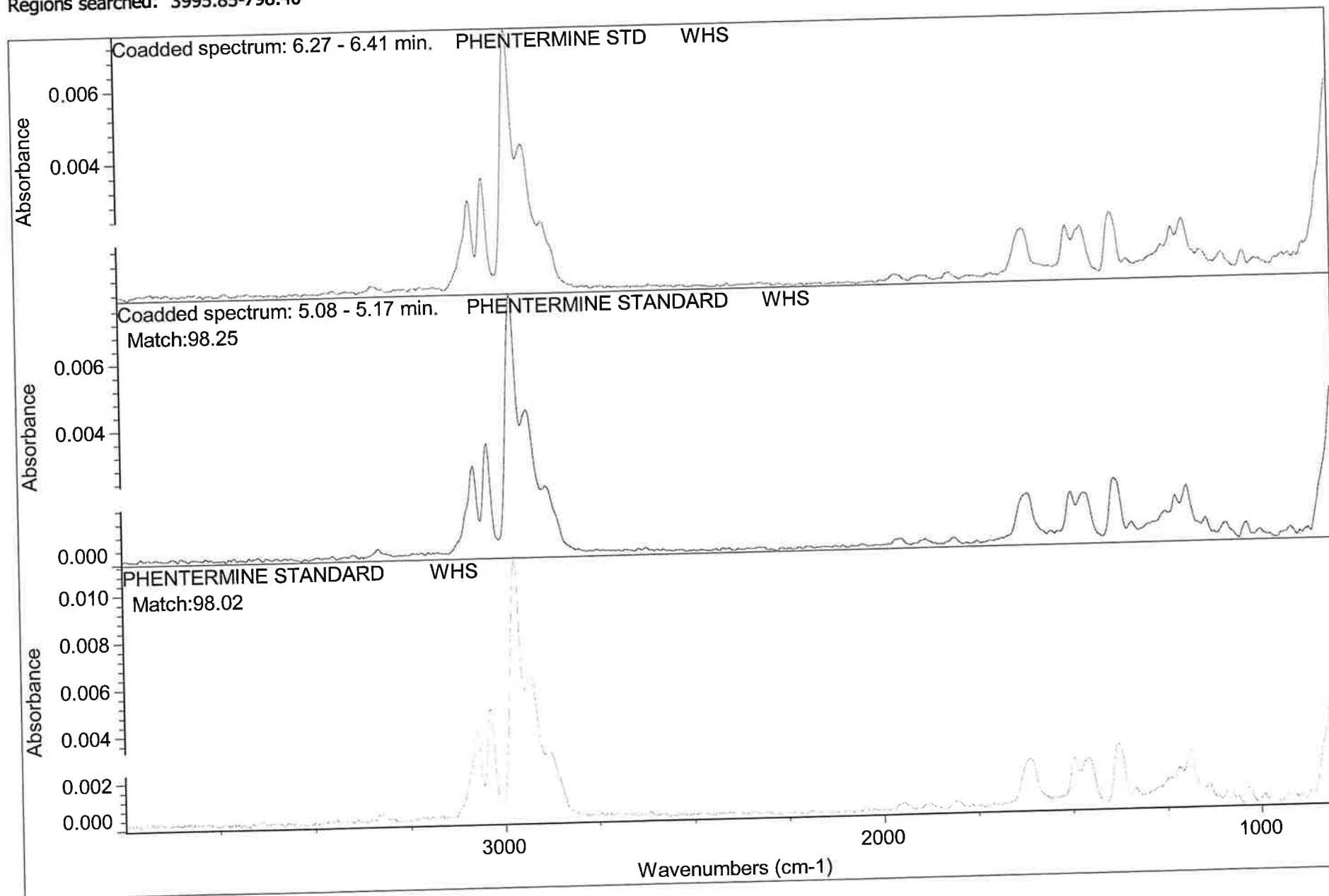
Date: Thu Jul 12 10:43:48 2001

Linked spectrum at 6.330 min. PHENTERMINE STD WHS

Scans: 1

Resolution: 8.000

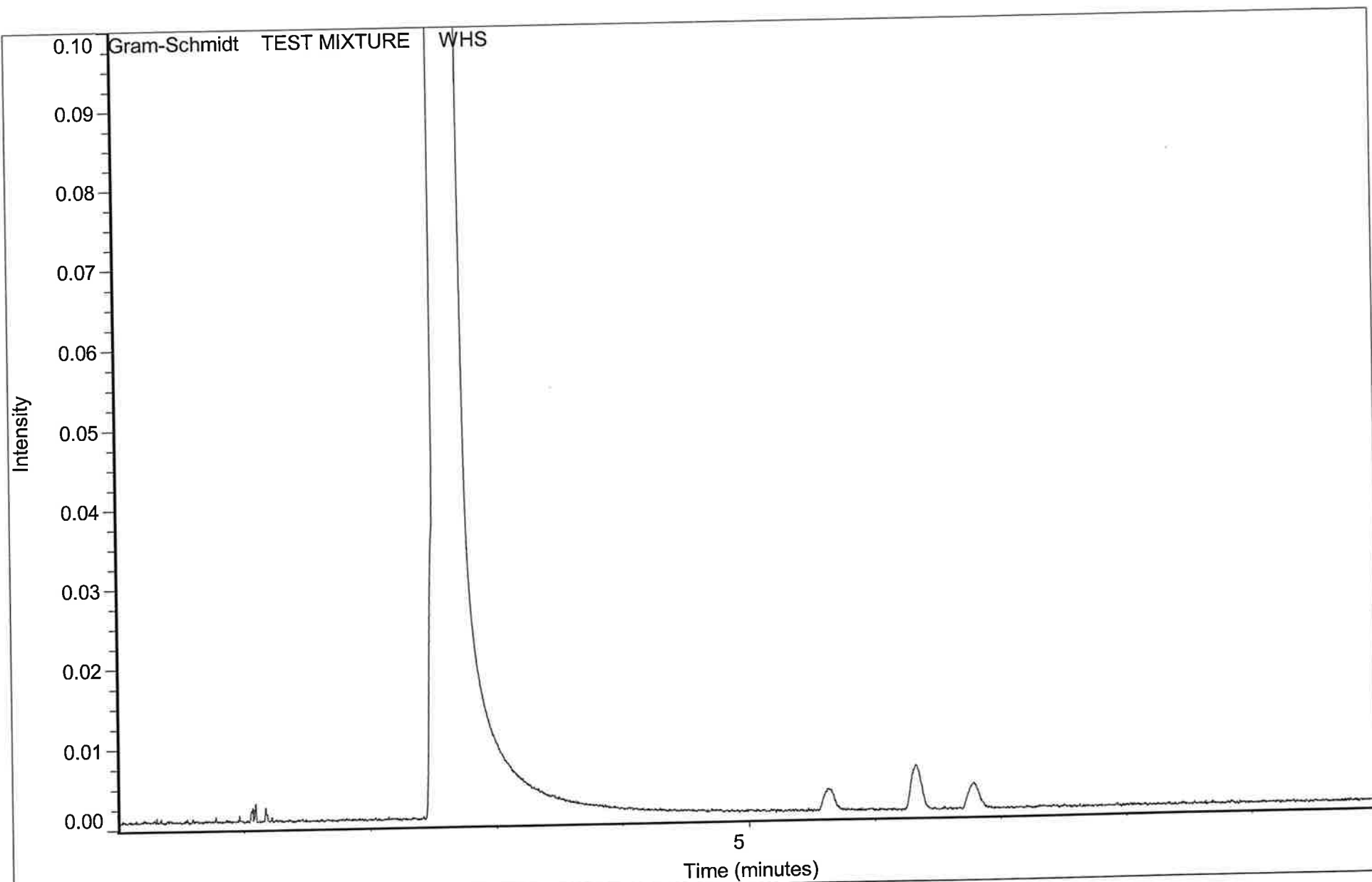
Search results for: Coadded spectrum: 6.27 - 6.41 min. PHENTERMINE STD WHS
Date: Thu Jul 12 11:14:02 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 6.27 - 6.41 min. PHENTERMINE STD WHS
 Date: Thu Jul 12 11:14:02 2001
 Search algorithm: Correlation
 Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name		Library Name
1	6	98.25	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
2	5	98.02	PHENTERMINE STANDARD	WHS	TEST
3	2	84.52	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
4	1	83.78	AMPHETAMINE STANDARD	WHS	TEST
5	4	77.94	TERT-BUTYLBENZENE, 99%		Aldrich Vapor Phase Sample Library
6	74	75.18	HEPTANE, 99%		Aldrich Vapor Phase Sample Library
7	23	70.88	2,4-DIMETHYL-3-PENTANOL, 99%		Aldrich Vapor Phase Sample Library
8	64	70.05	ISOBUTYLAMINE, 99%		Aldrich Vapor Phase Sample Library
9	3	69.92	METHAMPHETAMINE STANDARD	WHS	TEST
10	4	69.87	Coadded spectrum: 5.46 - 5.52 min.	METHAMPHETAMINE STANDA	TEST

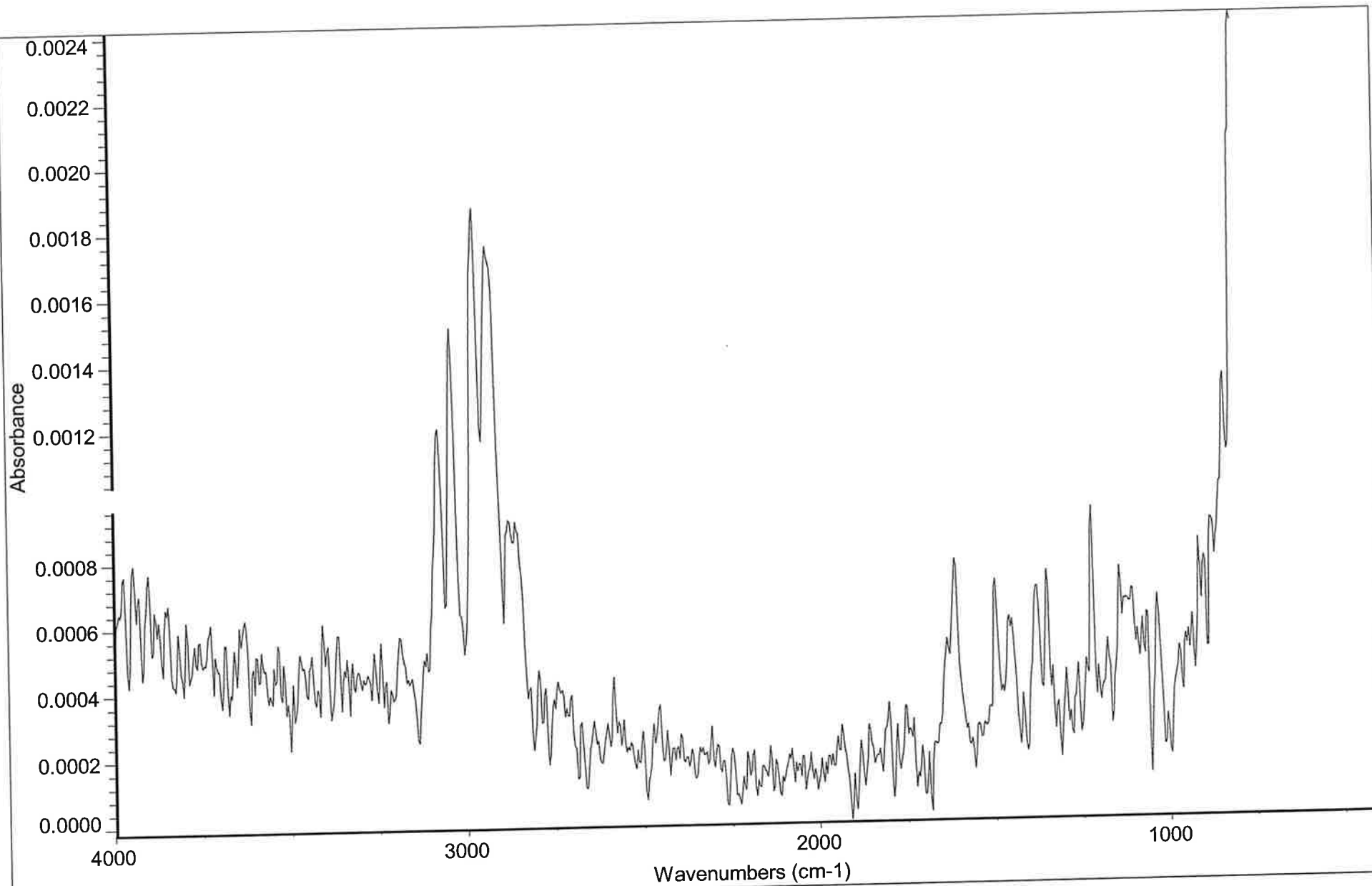


Date: Wed Feb 06 00:38:16 2036

Linked spectrum at 10.001 min.

Scans: 1

Resolution: 8.000



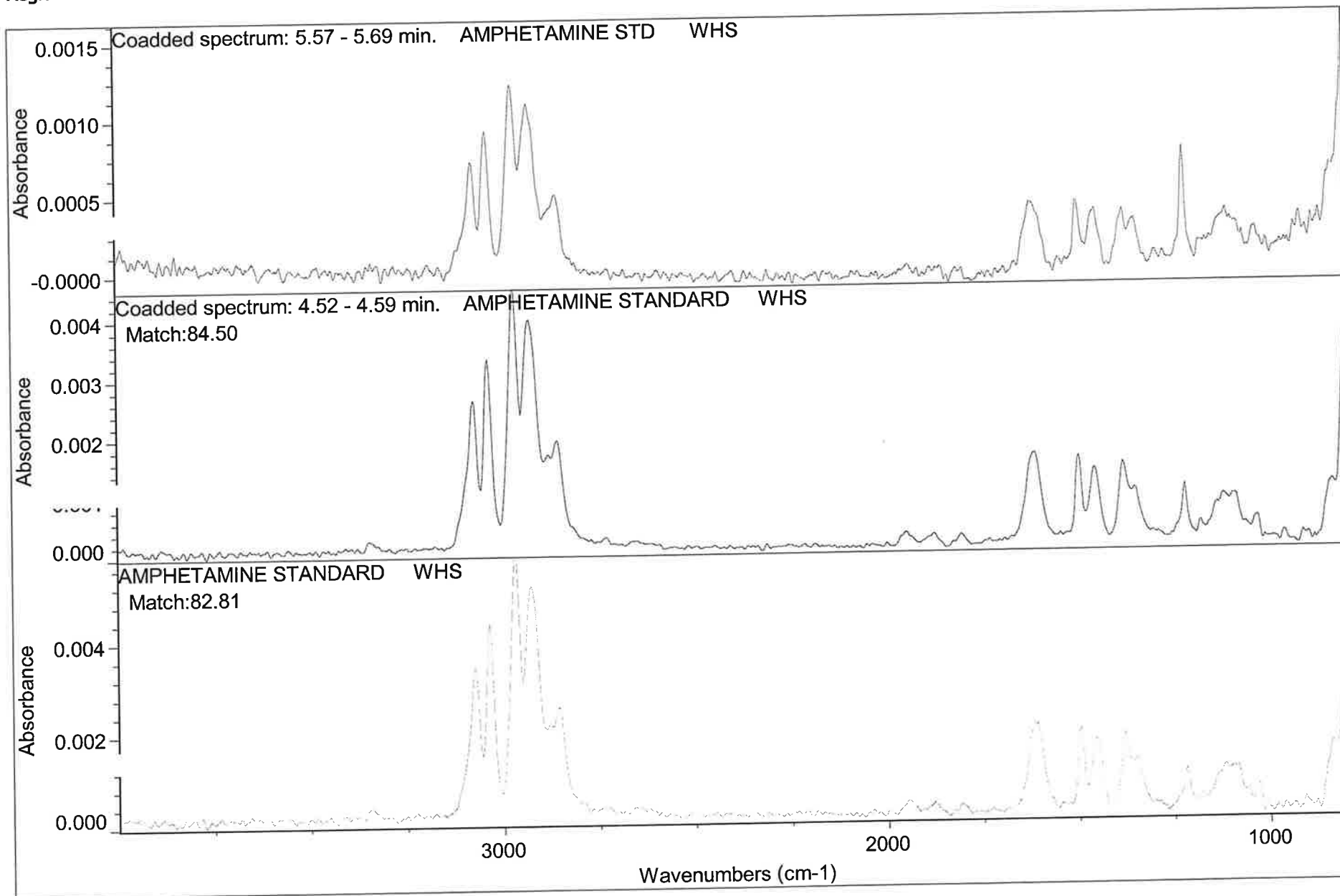
Date: Thu Jul 12 10:53:58 2001

Linked spectrum at 5.633 min. AMPHETAMINE TEST WHS

Scans: 1

Resolution: 8.000

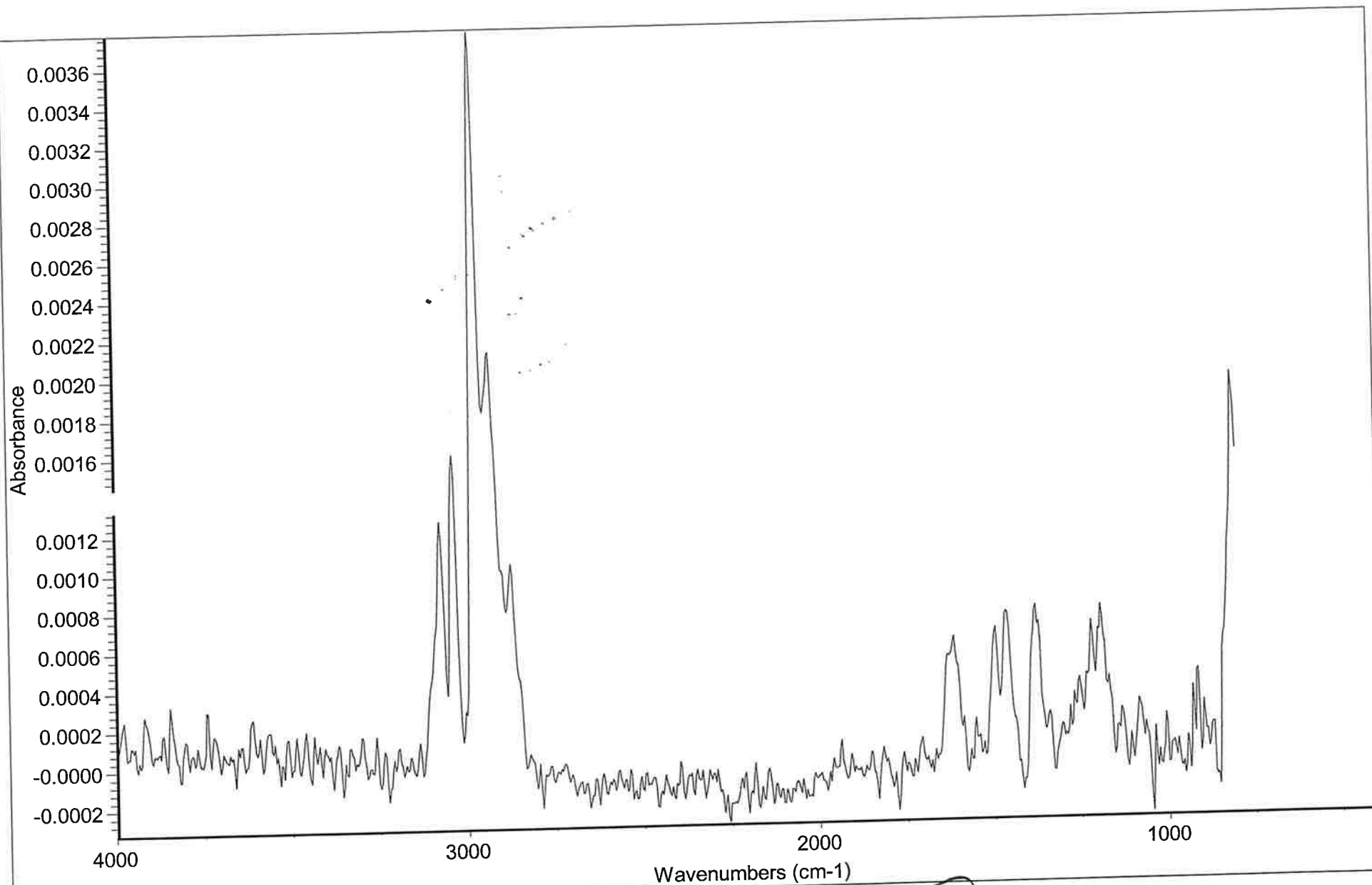
Search results for: Coadded spectrum: 5.57 - 5.69 min. AMPHETAMINE STD WHS
Date: Thu Jul 12 11:15:35 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: Coadded spectrum: 5.57 - 5.69 min. AMPHETAMINE STD WHS
 Date: Thu Jul 12 11:15:35 2001
 Search algorithm: Correlation
 Regions searched: 3995.85-798.40

Search results list of matches

Index		Match	Compound Name	Library Name
1	2	84.50	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
2	1	82.81	AMPHETAMINE STANDARD WHS	TEST
3	6	70.72	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	69.36	PHENTERMINE STANDARD WHS	TEST
5	3	58.08	METHAMPHETAMINE STANDARD WHS	TEST
6	4	58.02	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	Aldrich Vapor Phase Sample Library
7	4	49.97	TERT-BUTYLBENZENE, 99%	Aldrich Vapor Phase Sample Library
8	58	48.67	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
9	31	46.24	TRANS-4-OCTENE, 99%	Aldrich Vapor Phase Sample Library
10	10	46.04	1,4-DIMETHYLCYCLOHEXANE, 99%, MIXTURE OF CIS AND TRANS	



Date: Thu Jul 12 10:54:40 2001

Linked spectrum at 6.328 min.

^{LOH}
~~METHAMPHETAMINE TEST~~

WHS

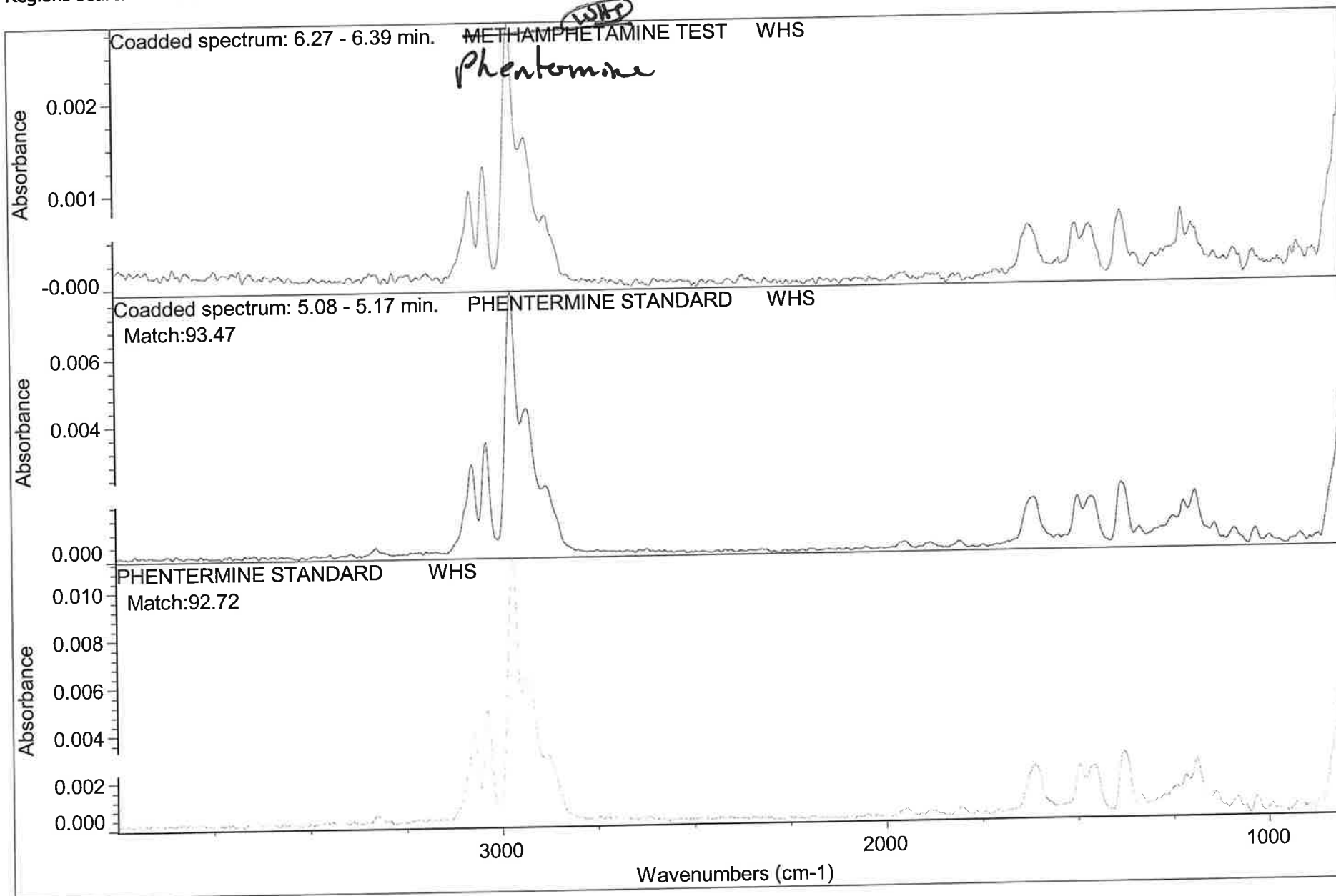
Phentemine

Scans: 1

Resolution: 8.000

Search results for: Coadded spectrum: 6.27 - 6.39 min. ~~METHAMPHETAMINE TEST~~ WHS
Date: Thu Jul 12 11:16:42 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

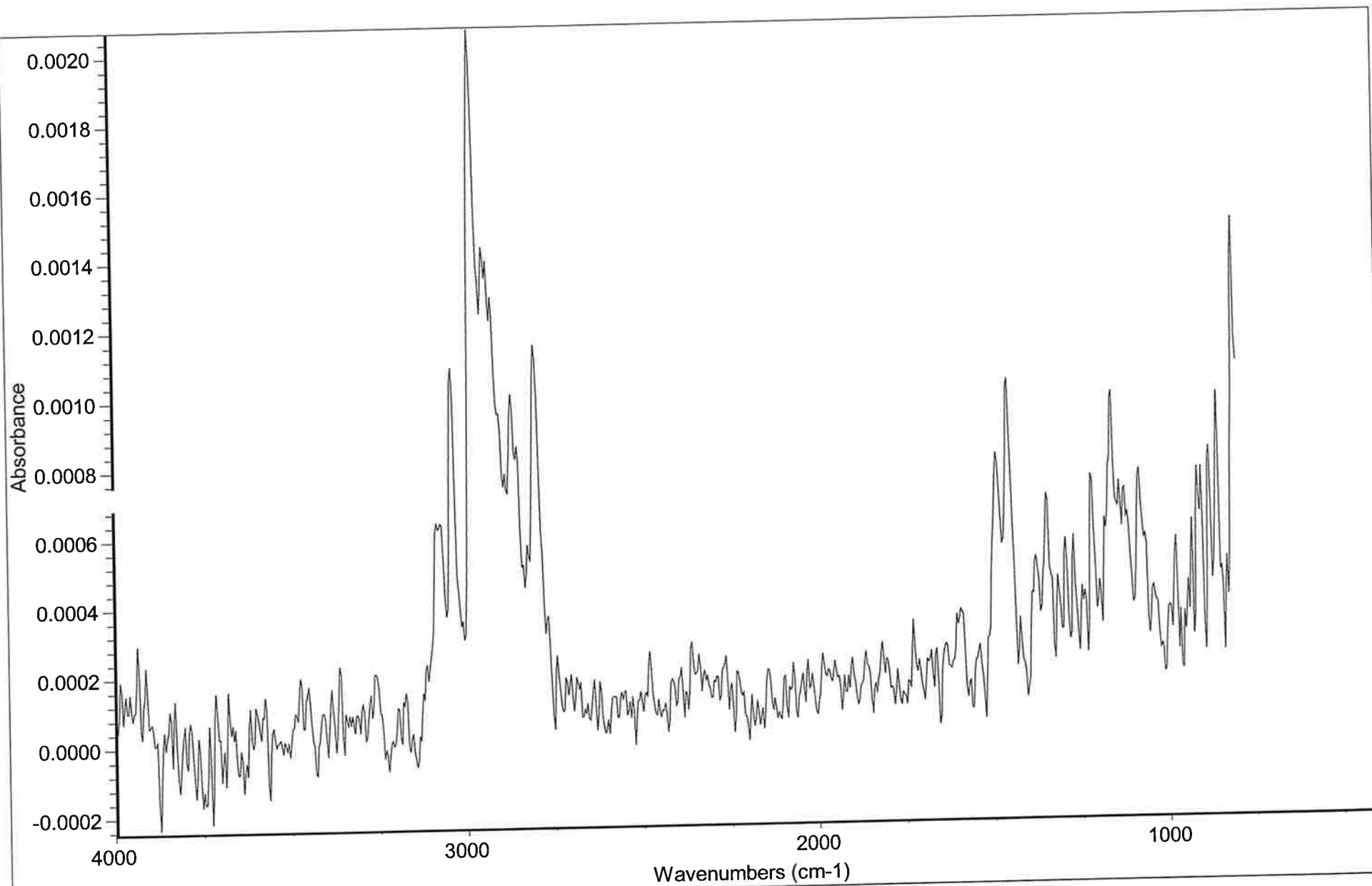
Phentermine
Coadded spectrum: 6.27 - 6.39 min. ~~METHAMPHETAMINE TEST~~ WHS



Search results for: Coadded spectrum: 6.27 - 6.39 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 11:16:42 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

	Index	Match	Compound Name		Library Name
1	6	93.47	Coadded spectrum: 5.08 - 5.17 min.	PHENTERMINE STANDARD	TEST
2	5	92.72	PHENTERMINE STANDARD	WHS	TEST
3	2	83.19	Coadded spectrum: 4.52 - 4.59 min.	AMPHETAMINE STANDARD	TEST
4	1	82.08	AMPHETAMINE STANDARD	WHS	TEST
5	4	76.76	TERT-BUTYLBENZENE, 99%		Aldrich Vapor Phase Sample Library
6	74	73.42	HEPTANE, 99%		Aldrich Vapor Phase Sample Library
7	64	68.70	ISOBUTYLAMINE, 99%		Aldrich Vapor Phase Sample Library
8	23	68.67	2,4-DIMETHYL-3-PENTANOL, 99%		Aldrich Vapor Phase Sample Library
9	4	68.21	Coadded spectrum: 5.46 - 5.52 min.	METHAMPHETAMINE STANDA	TEST
10	3	68.05	METHAMPHETAMINE STANDARD	WHS	TEST



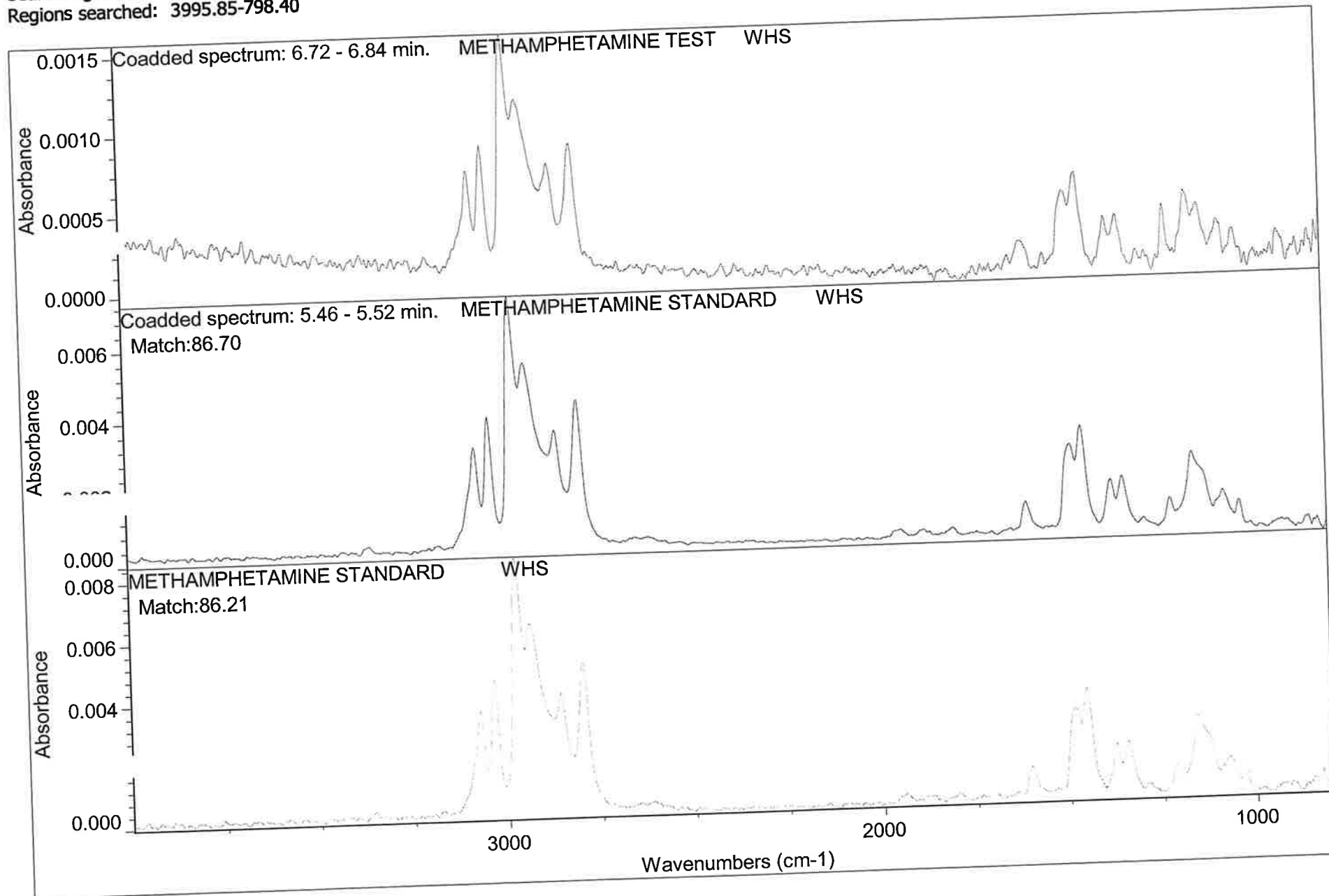
Date: Thu Jul 12 10:55:08 2001

Linked spectrum at 6.786 min. METHAMPHETAMINE TEST WHS

Scans: 1

Resolution: 8.000

Search results for: Coadded spectrum: 6.72 - 6.84 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 11:19:00 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

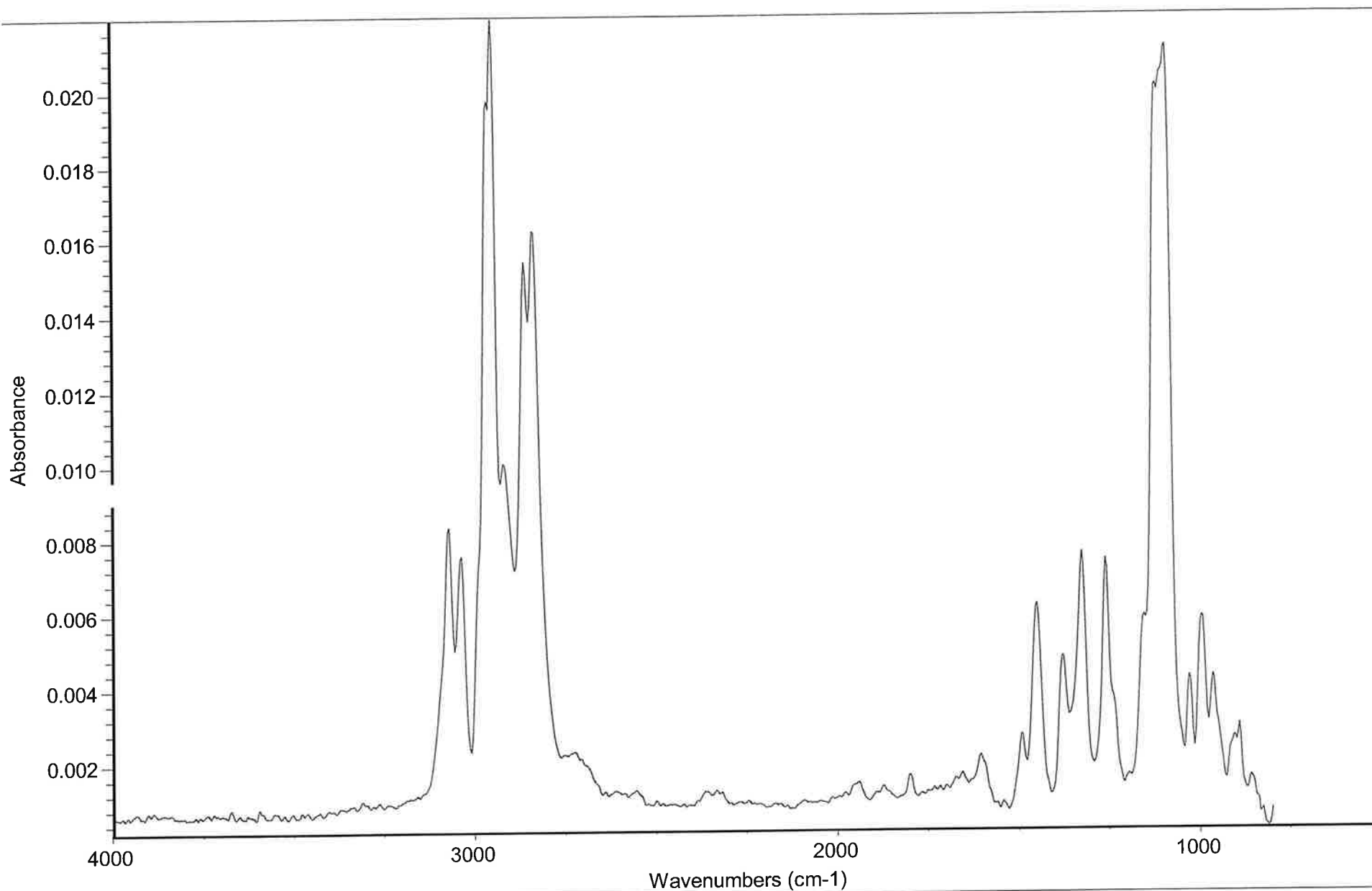


Search results for: Coadded spectrum: 6.72 - 6.84 min. METHAMPHETAMINE TEST WHS
Date: Thu Jul 12 11:19:00 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

Search results list of matches

		Compound Name		Library Name
Index	Match			TEST
1	4	86.70	Coadded spectrum: 5.46 - 5.52 min. METHAMPHETAMINE STANDA	TEST
2	3	86.21	METHAMPHETAMINE STANDARD WHS	TEST
3	6	61.85	Coadded spectrum: 5.08 - 5.17 min. PHENTERMINE STANDARD	TEST
4	5	60.77	PHENTERMINE STANDARD WHS	TEST
5	2	60.43	Coadded spectrum: 4.52 - 4.59 min. AMPHETAMINE STANDARD	TEST
6	1	59.48	AMPHETAMINE STANDARD WHS	Aldrich Vapor Phase Sample Library
7	78	57.03	3-ETHYLTOLUENE, 99%	Aldrich Vapor Phase Sample Library
8	28	55.93	DICYCLOPENTADIENE, 95%	Aldrich Vapor Phase Sample Library
9	58	55.51	TERPINEN-4-OL, 95%	Aldrich Vapor Phase Sample Library
10	57	54.08	ALPHA-TERPINEOL, 98%	

NAME	UNKNOWN #1	UNKNOWN #2	UNKNOWN #3
Phillip Freeze	Phentermine	Phenmetrazine	1(α) Triflouro-m-tolyl-piperizine
William Stanton	Amphetamine	1-Benzylpiperazine	Methamphetamine
Kathy Carman	Methamphetamine	Phendimetrazine	Amphetamine
Donna Flowers	Phentermine	Phenmetrazine	Methamphetamine
Dianne Smith	Ephedrine	p-Methoxyamphetamine	Methamphetamine
Glenn Everett	Pseudoephedrine	1(α) Triflouro-m-tolyl-piperizine	Methamphetamine
Tara Barker	Methylphenidate	Cathine	Methamphetamine
Glen Glenn	Benzphetamine	Cathinone	Methamphetamine
Cassandra Franklin	MDA	Methcathinone	Methamphetamine
Laura Hodge	Chlorphentermine	4-Methyl-2,5-di methoxyamphetamine	Methamphetamine

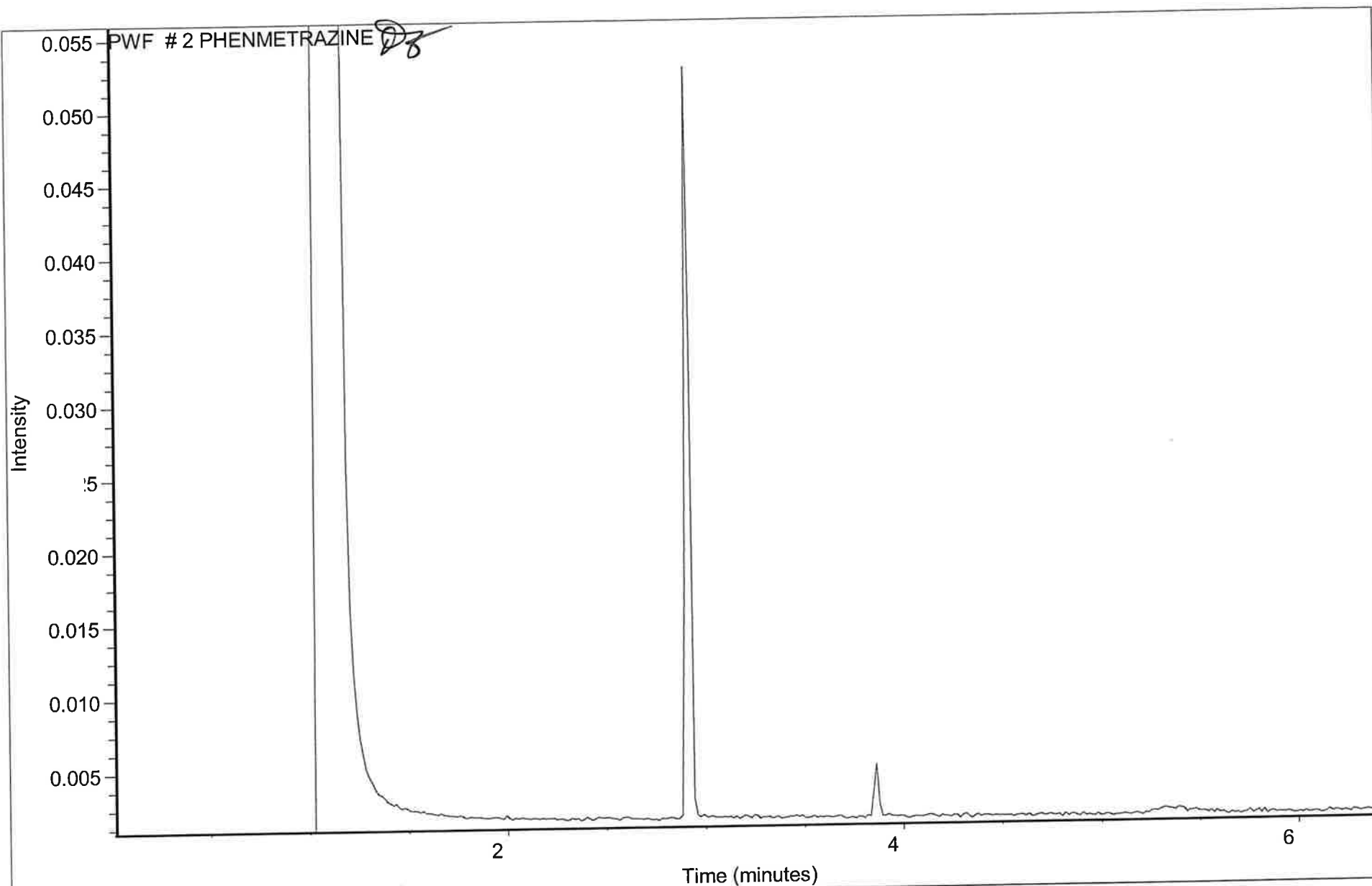


PWF #2 PHENMETRAZINE

IR #1

[Handwritten signature]

Collection time: Tue Aug 28 13:40:25 2001

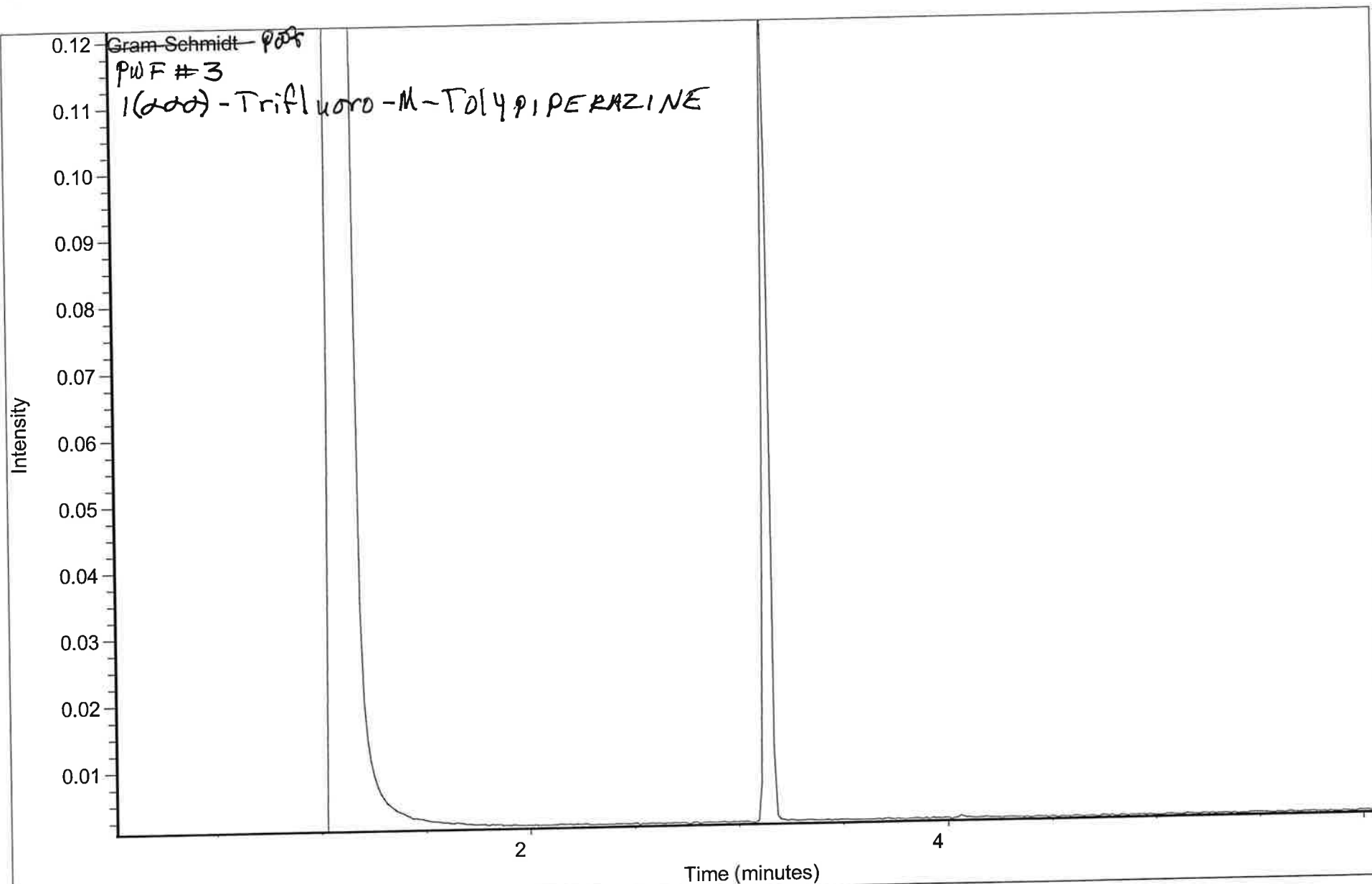


Date: ~~Wed Feb 06 00:36:57 2036~~ *DS*

Coadded spectrum: 2.90 - 2.93 min.

Scans: 12

Resolution: 8.000

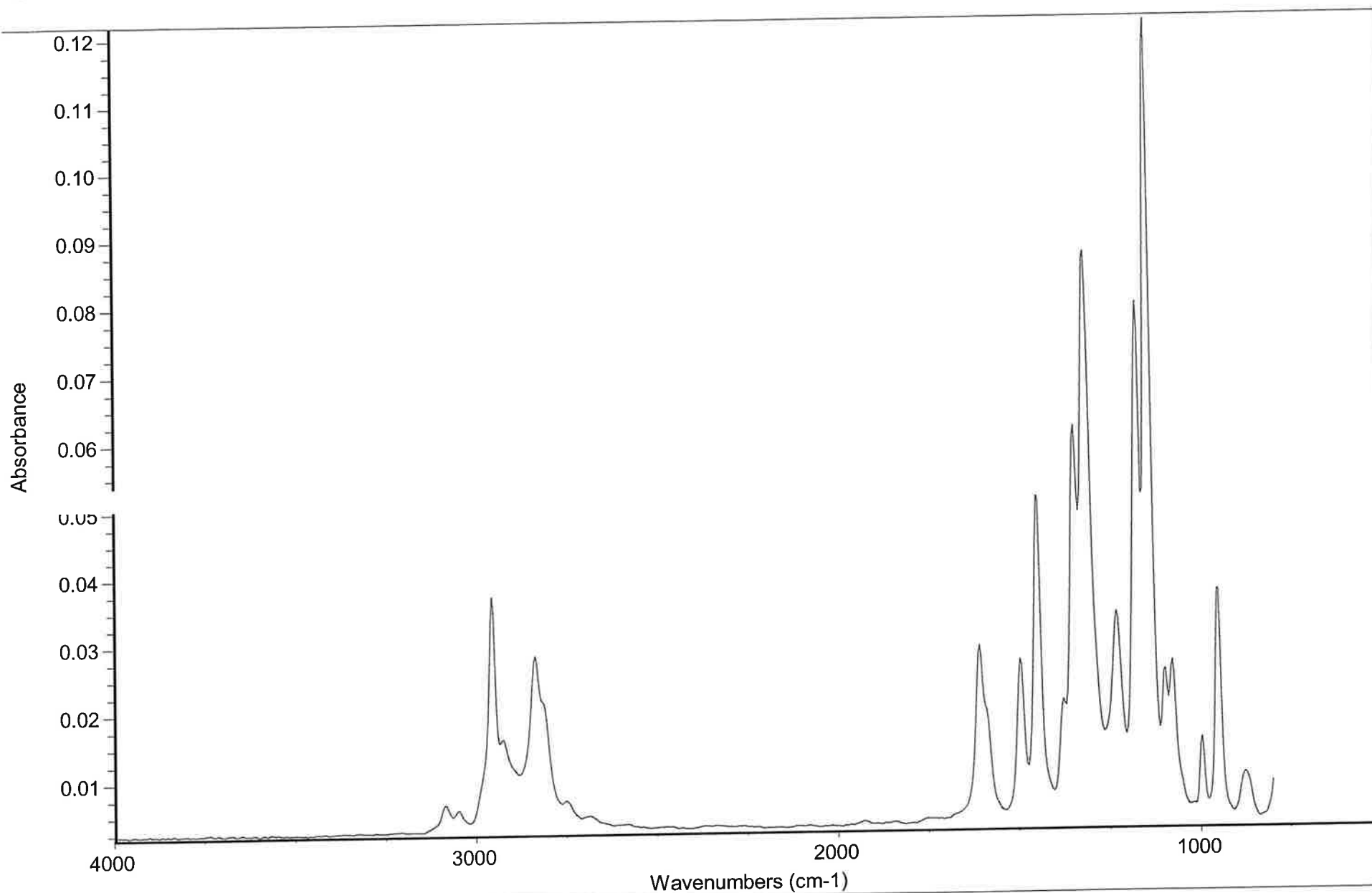


Date: Wed Feb 06 00:37:38 2036
17 8/28/01

Coadded spectrum: 3.12 - 3.15 min.

Scans: 12

Resolution: 8.000

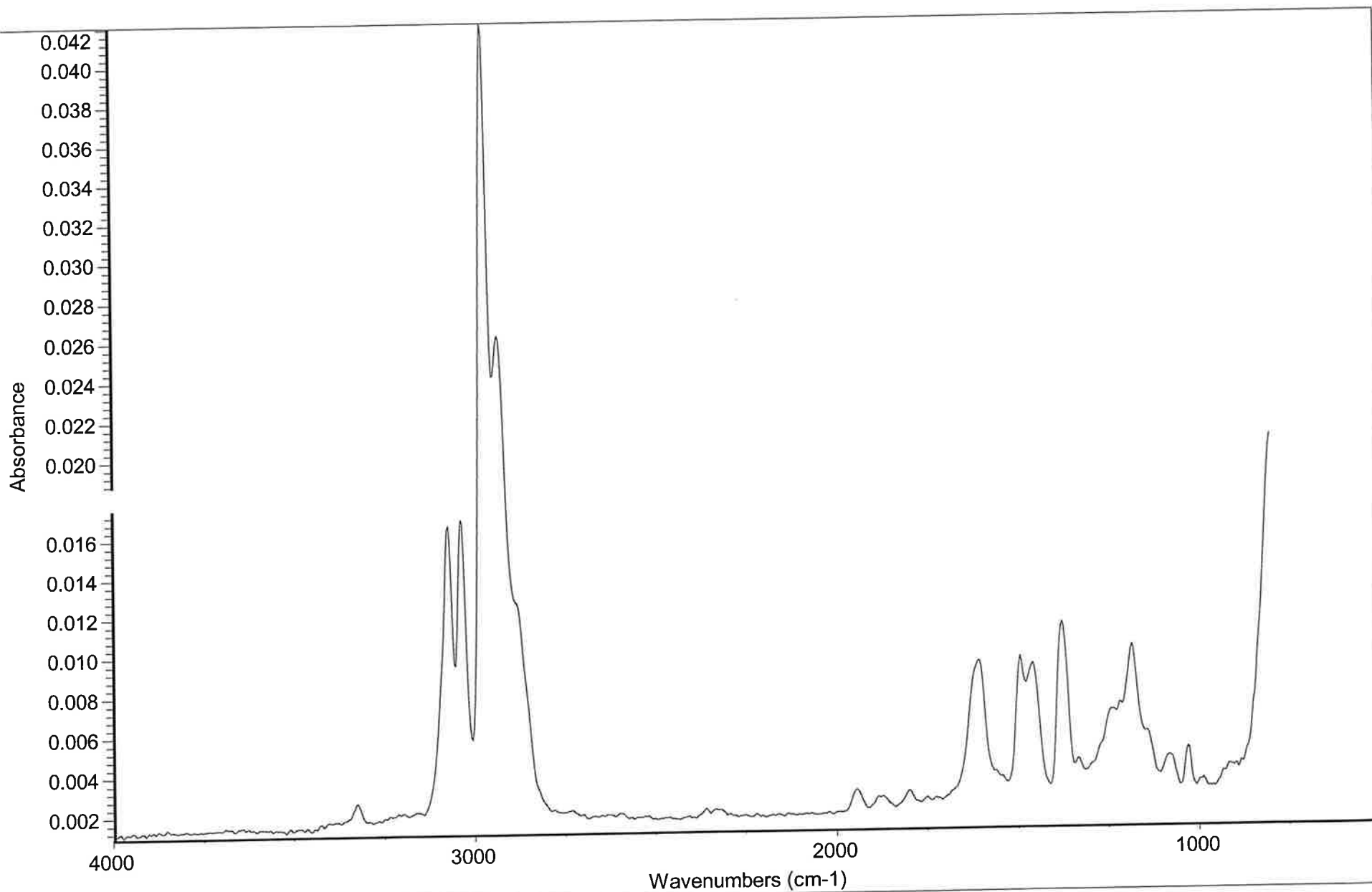


1(~~add~~)-TRIFLUORO-M-TOLYPIPERAZINE

IR #1 PWF #3-

JS

Collection time: Tue Aug 28 13:54:21 2001

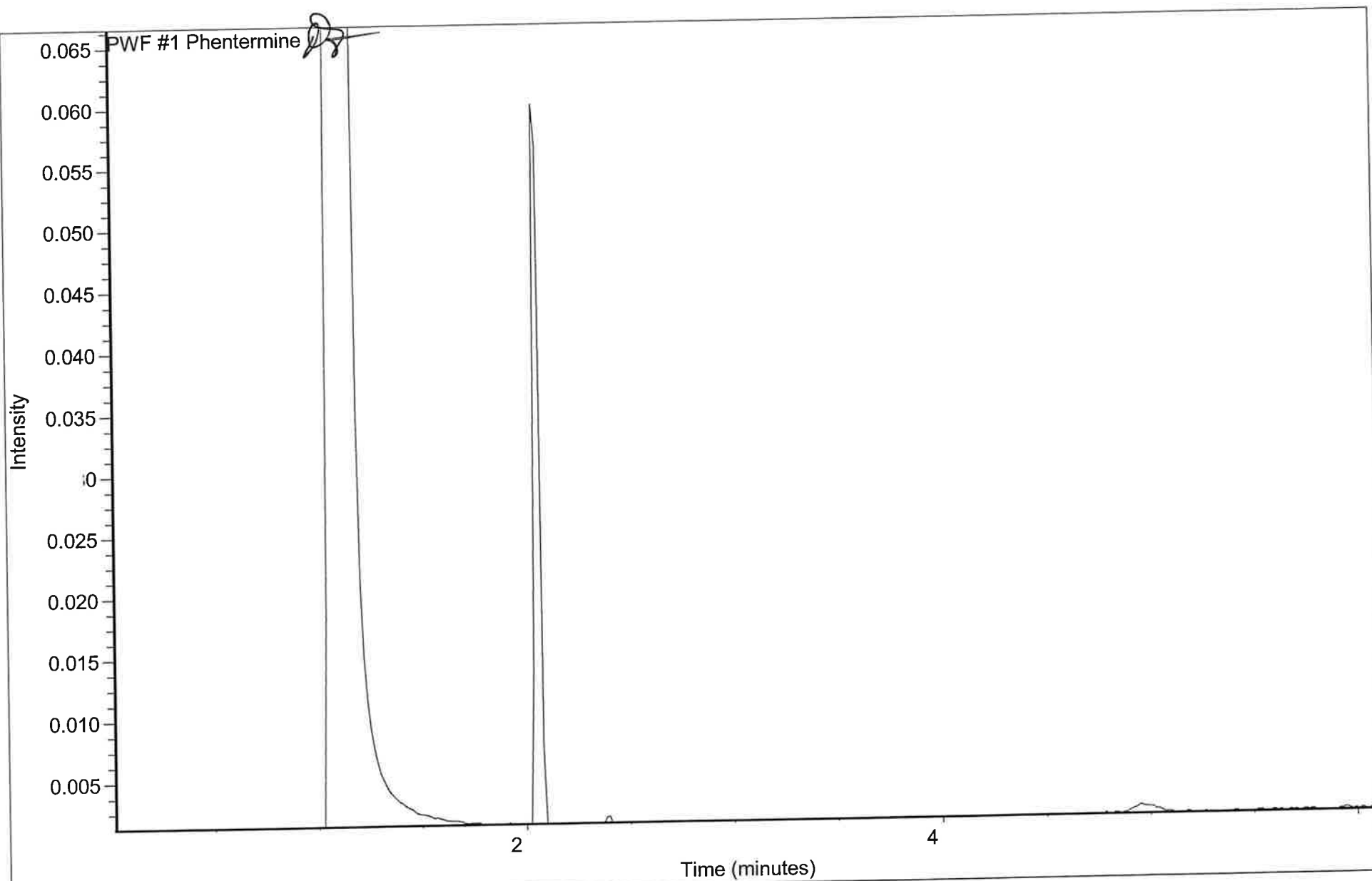


PWF #1 Phentermine

IR #1

[Handwritten signature]

Collection time: Tue Aug 28 13:25:06 2001

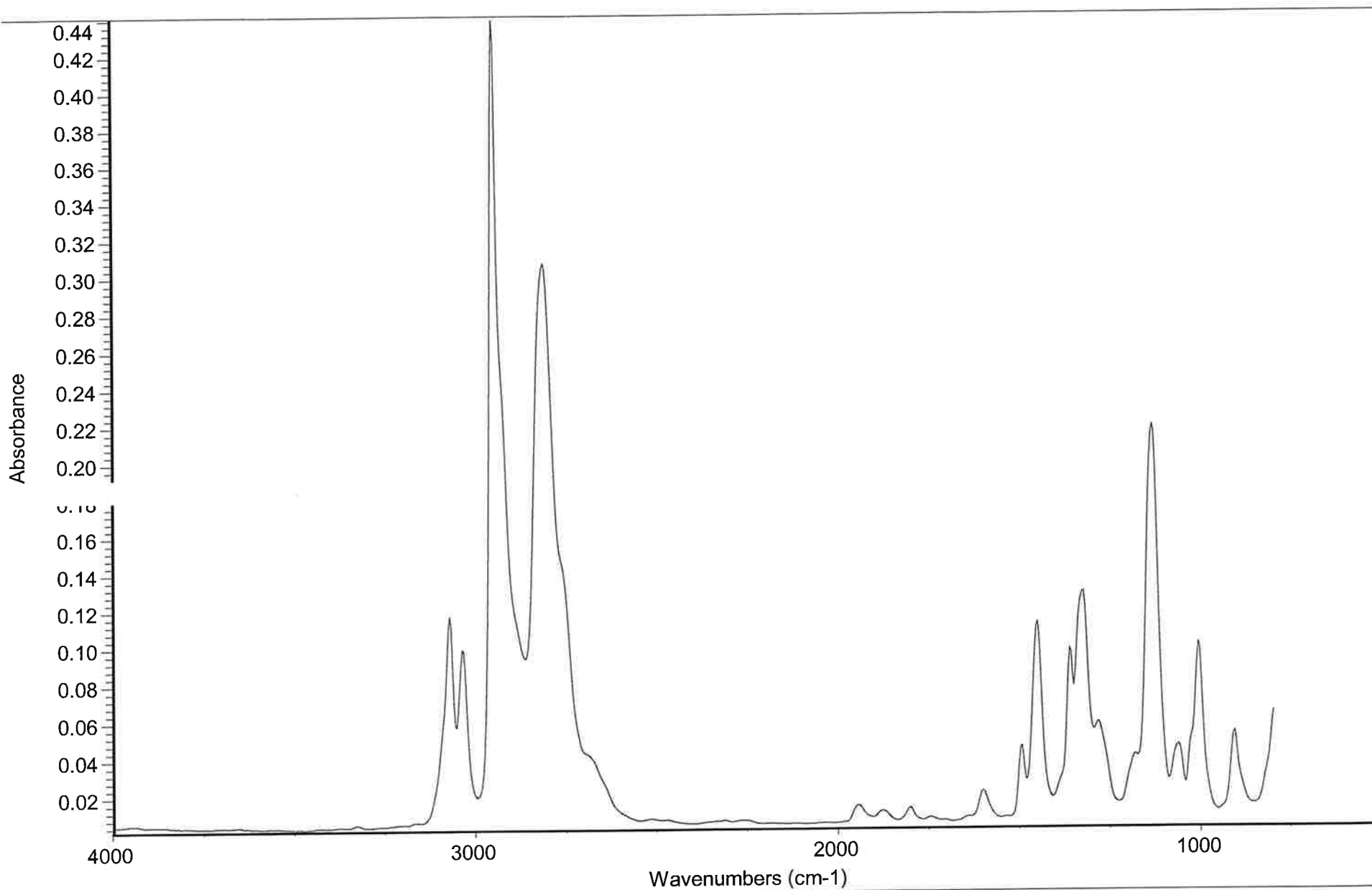


Date: Wed Feb 06 00:32:22 2036

Coadded spectrum: 2.05 - 2.07 min.

Scans: 8

Resolution: 8.000



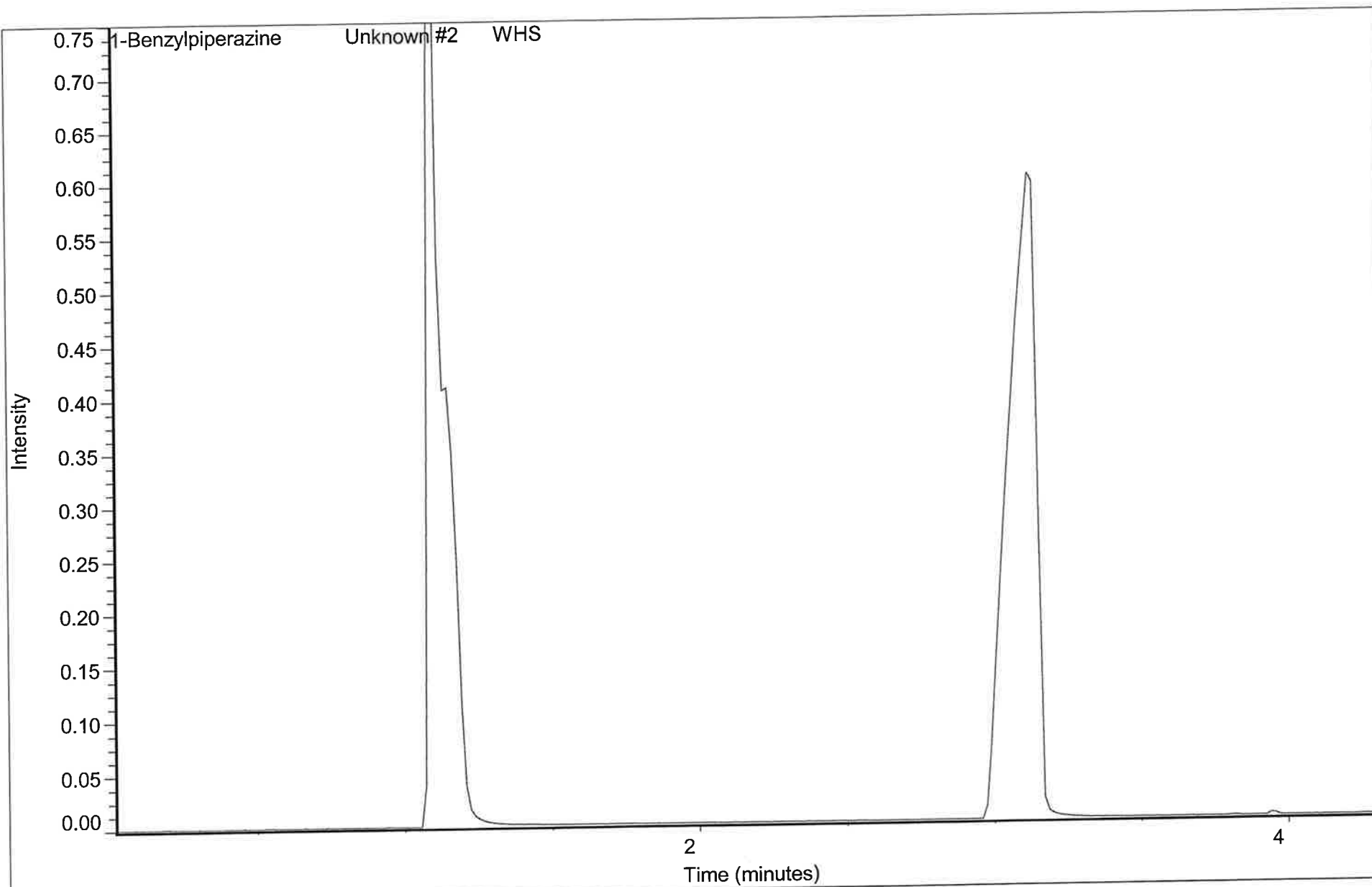
1-Benzylpiperazine

Unknown #2 WHS

IR #1

(Handwritten signature)

Collection time: Thu Aug 23 09:23:22 2001

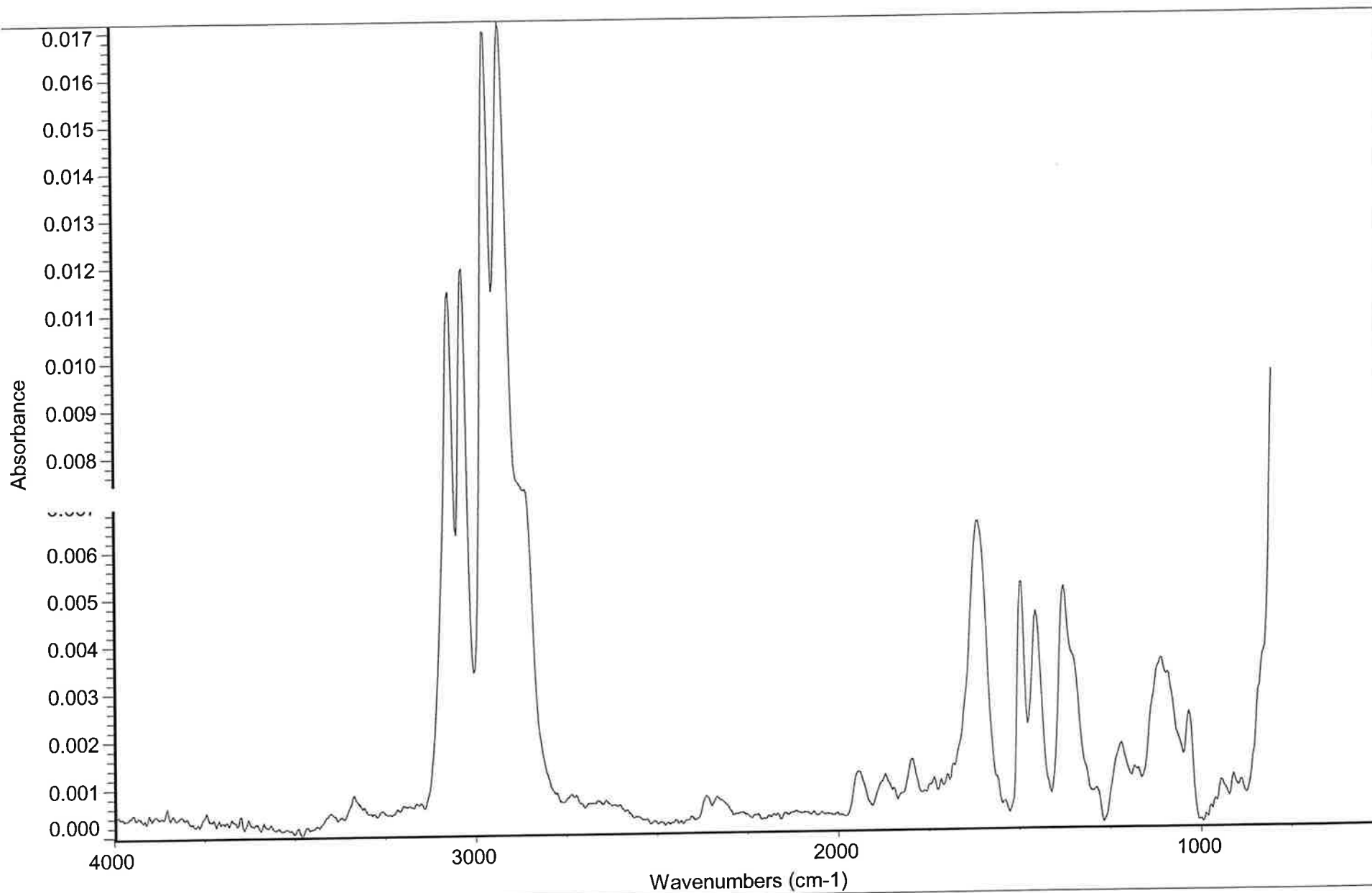


Date: Wed Feb 06 00:52:32 2036

Coadded spectrum: 3.03 - 3.14 min.

Scans: 32

Resolution: 8.000

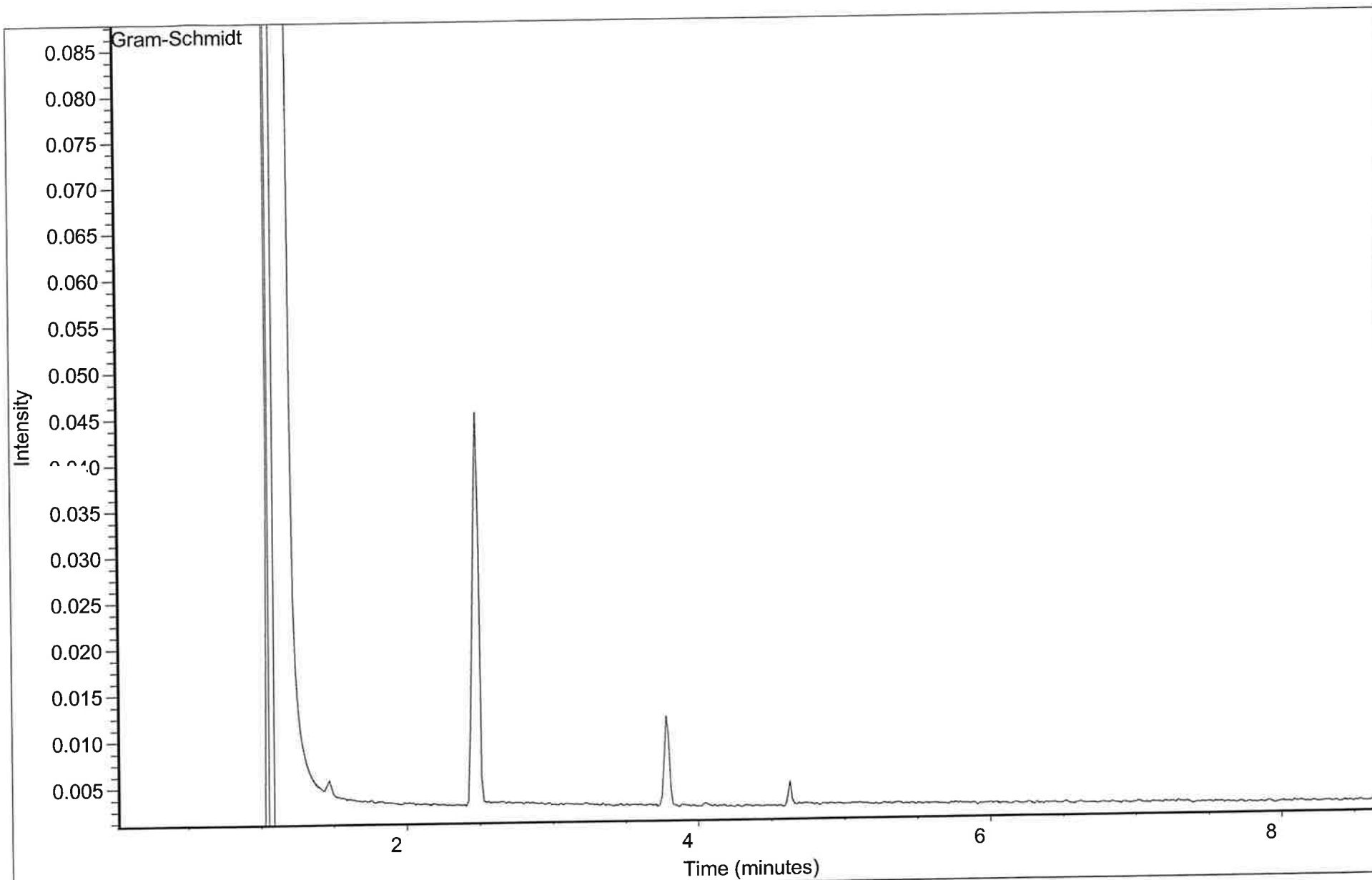


Unknown #1 WHS Amphetamine

IR #1

(Handwritten signature/initials)

Collection time: Wed Aug 22 15:45:28 2001

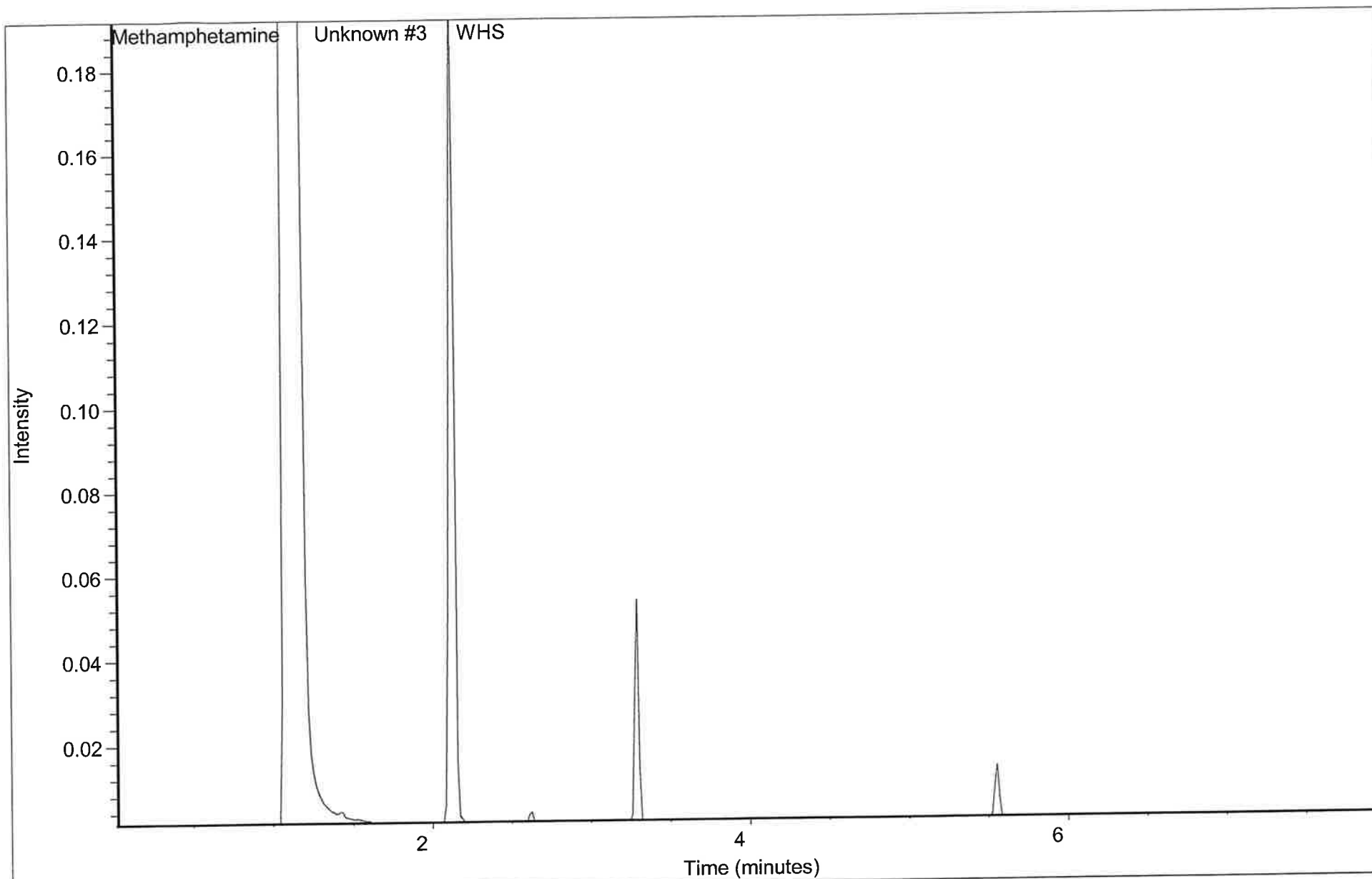


Date: Wed Feb 06 00:37:29 2036

Coadded spectrum: 4.61 - 4.63 min.

Scans: 8

Resolution: 8.000

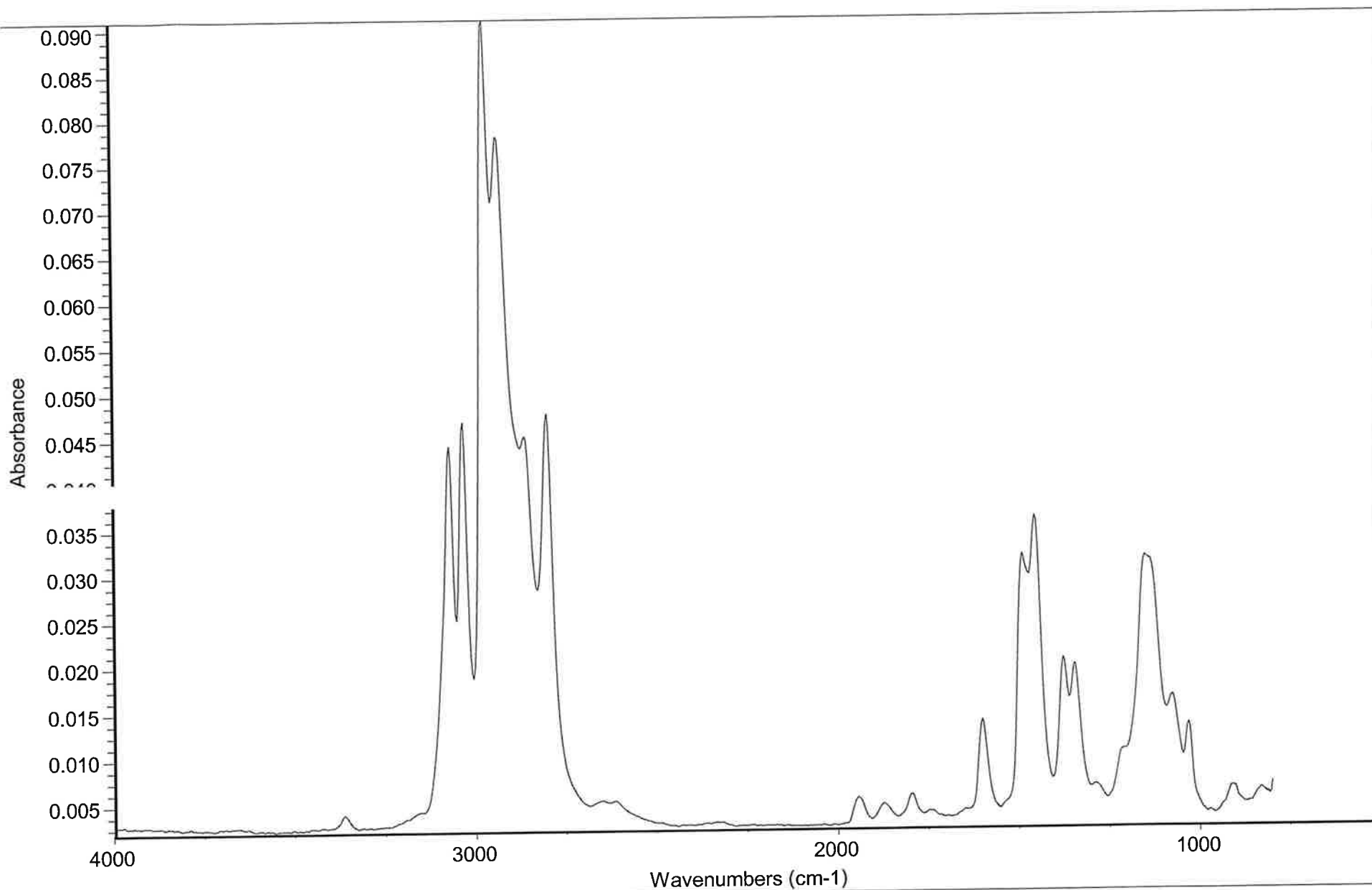


Date: Wed Feb 06 00:34:36 2036

Coadded spectrum: 2.11 - 2.14 min.

Scans: 12

Resolution: 8.000



Methamphetamine

Unknown #3 WHS

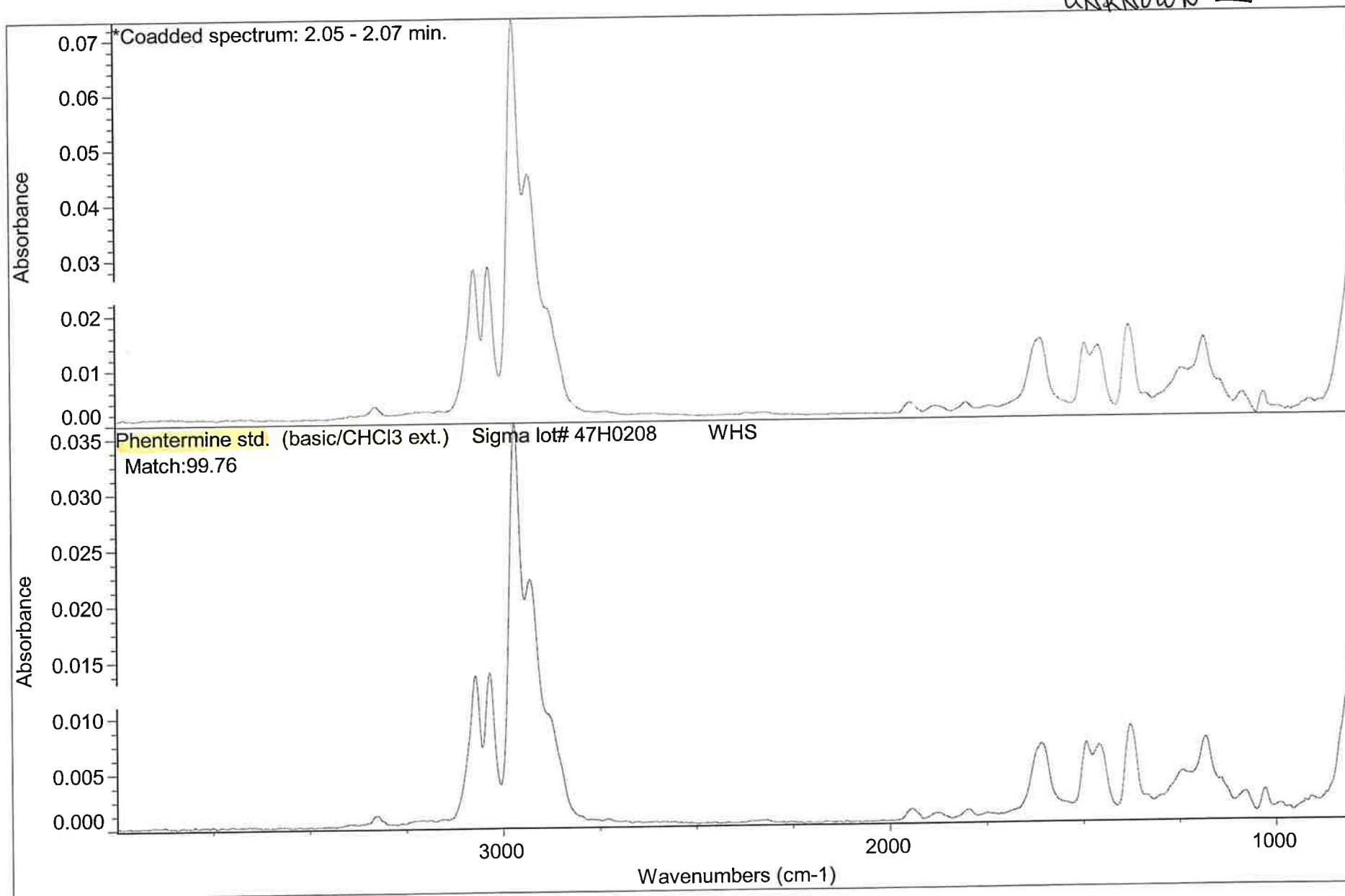
IR #1

WHS

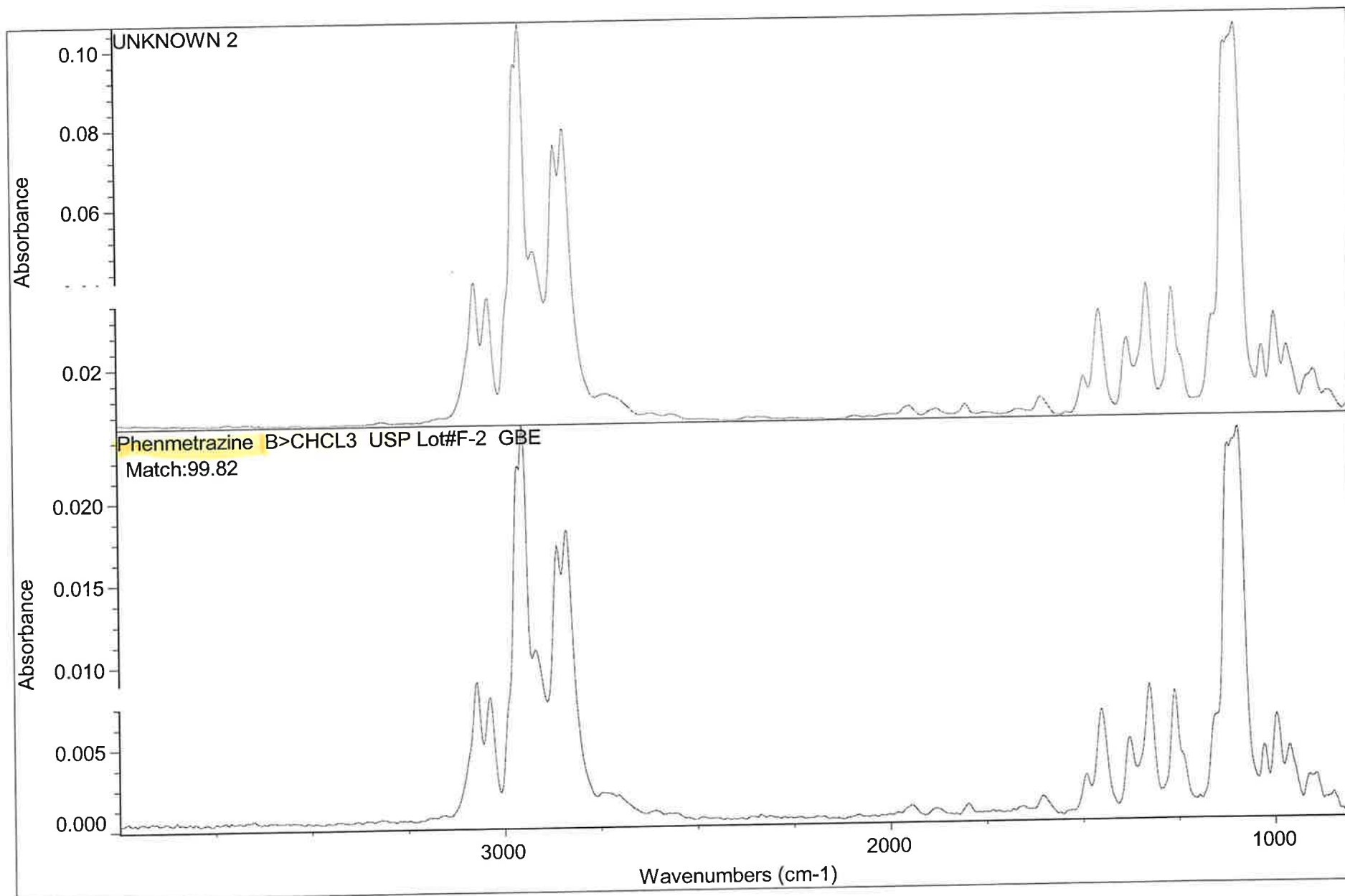
Collection time: Thu Aug 23 09:17:38 2001

Search results for: *Coadded spectrum: 2.05 - 2.07 min.
Date: Tue Aug 28 14:22:05 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

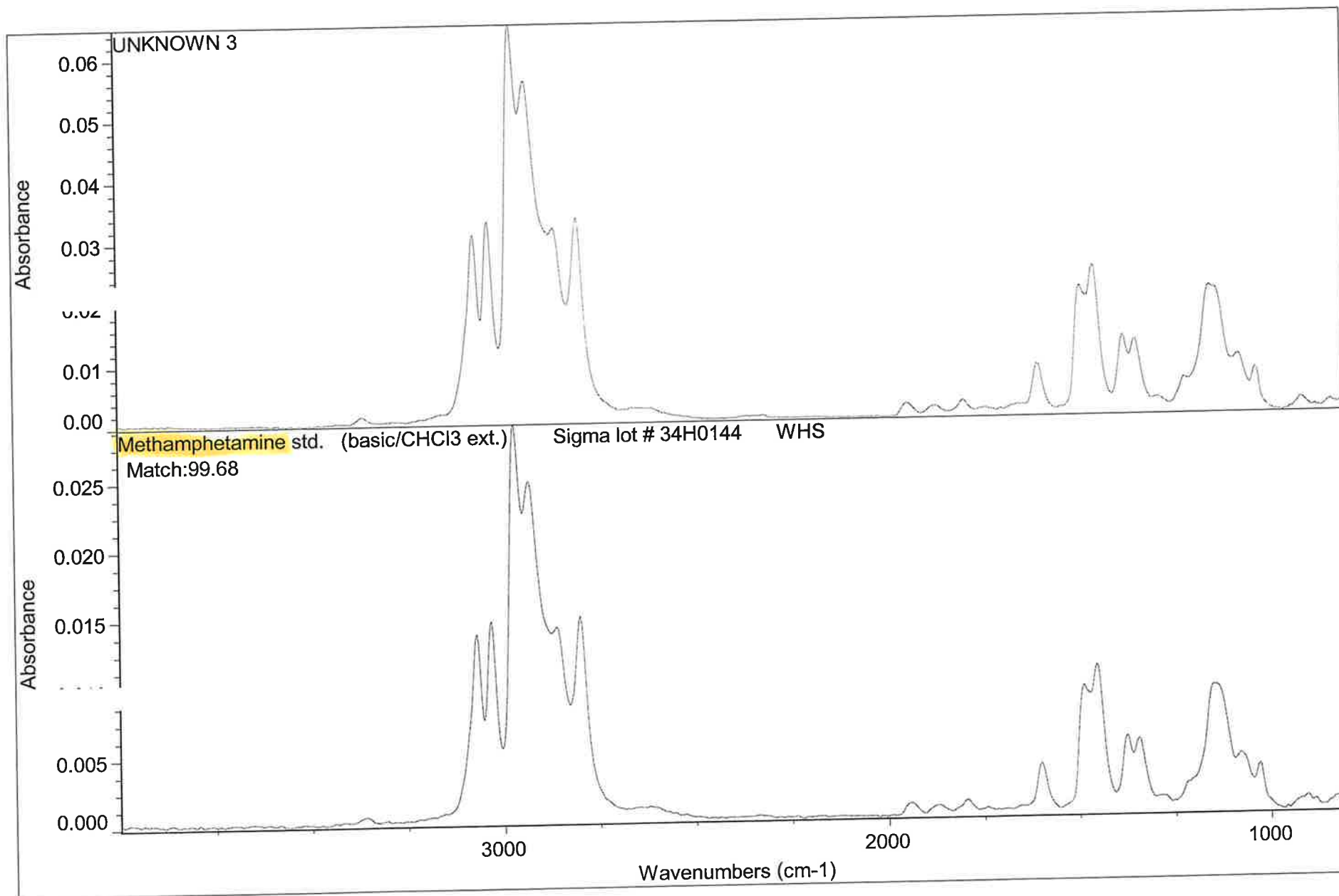
UNKNOWN 1

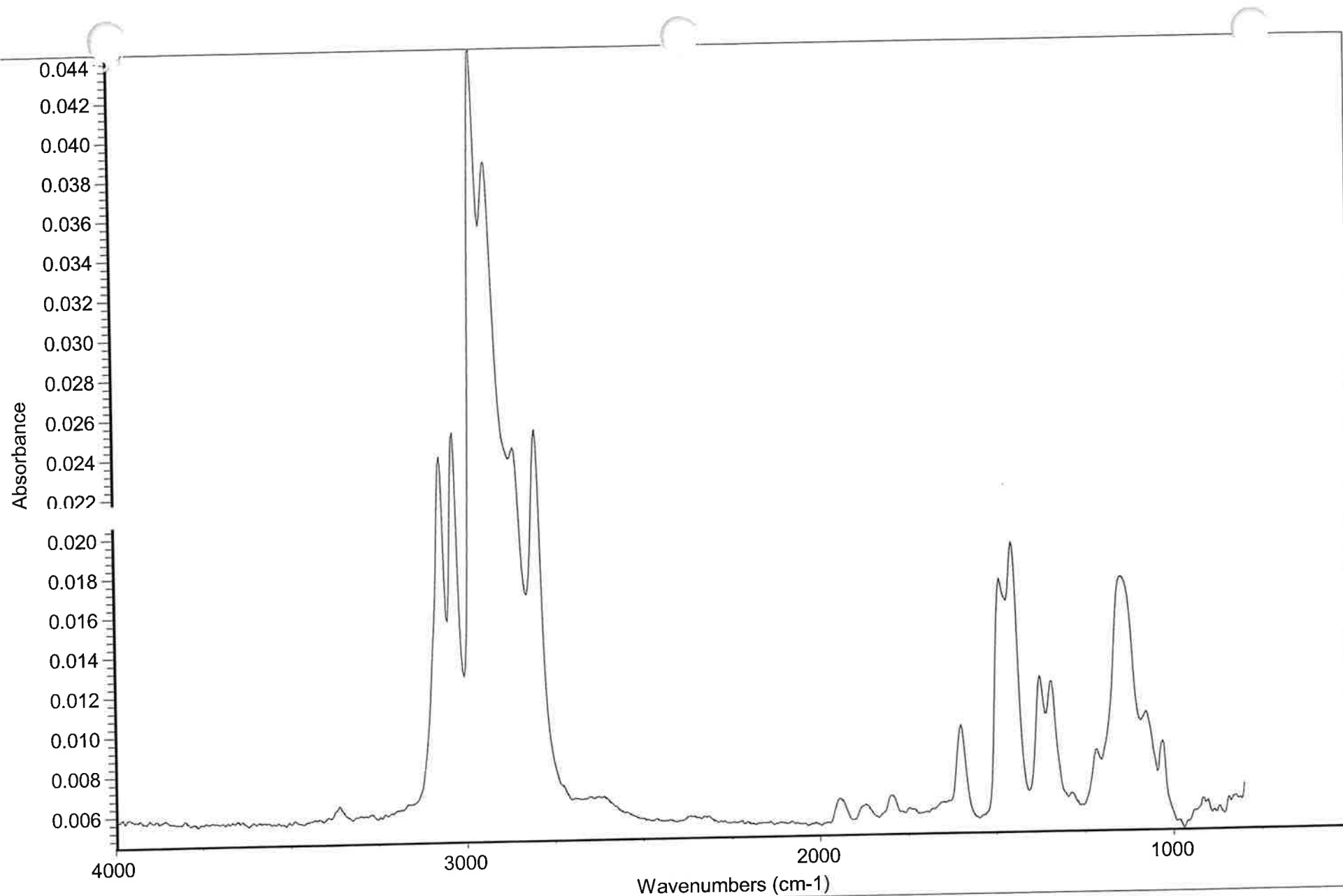


Search results for: UNKNOWN 2
Date: Tue Aug 28 14:34:01 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40



Search results for: UNKNOWN 3
Date: Tue Aug 28 14:44:36 2001
Search algorithm: Correlation
Regions searched: 3995.85-798.40

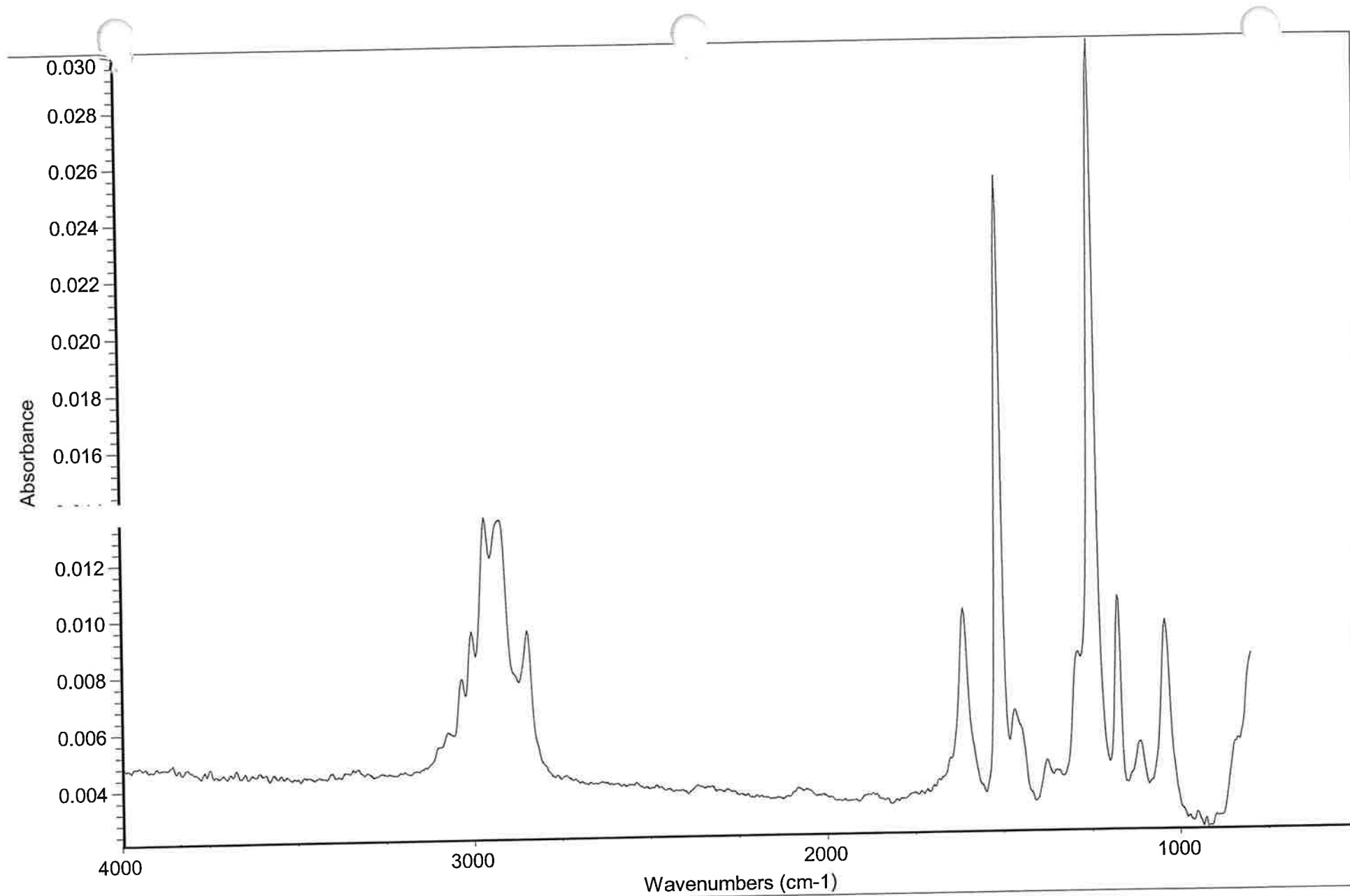




METHAMPHETAMINE DMS SAMPLE #3

IR #1

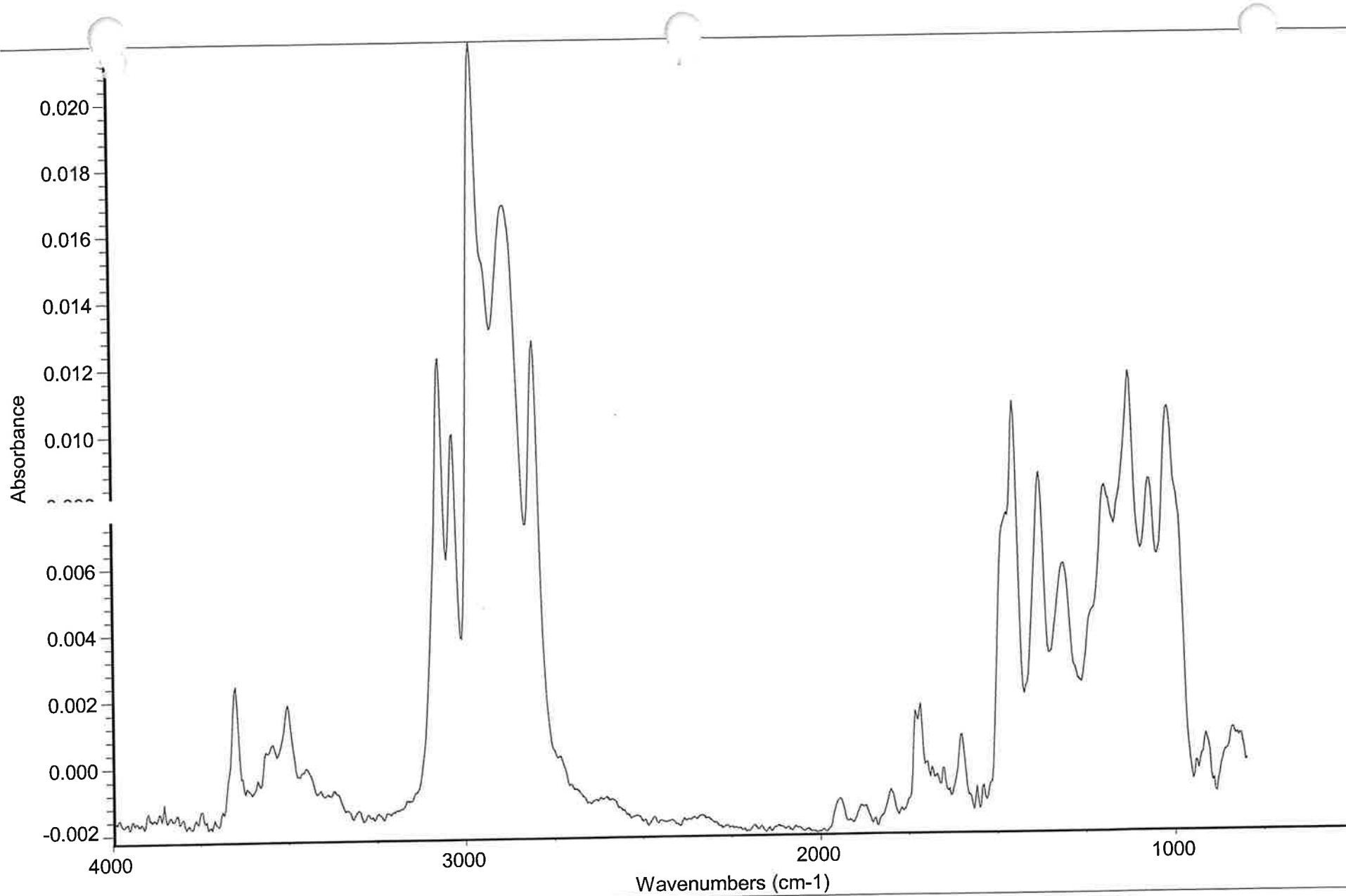
Collection time: Tue Aug 28 11:00:34 2001



P-METHOXYAMPHETAMINE DMS SAMPLE #2

IR #1

Collection time: Tue Aug 28 10:56:02 2001



EPHEDRINE DMS SAMPLE #1

IR #1

DMS

Collection time: Tue Aug 28 10:41:40 2001



Date: Unknown

Gram-Schmidt

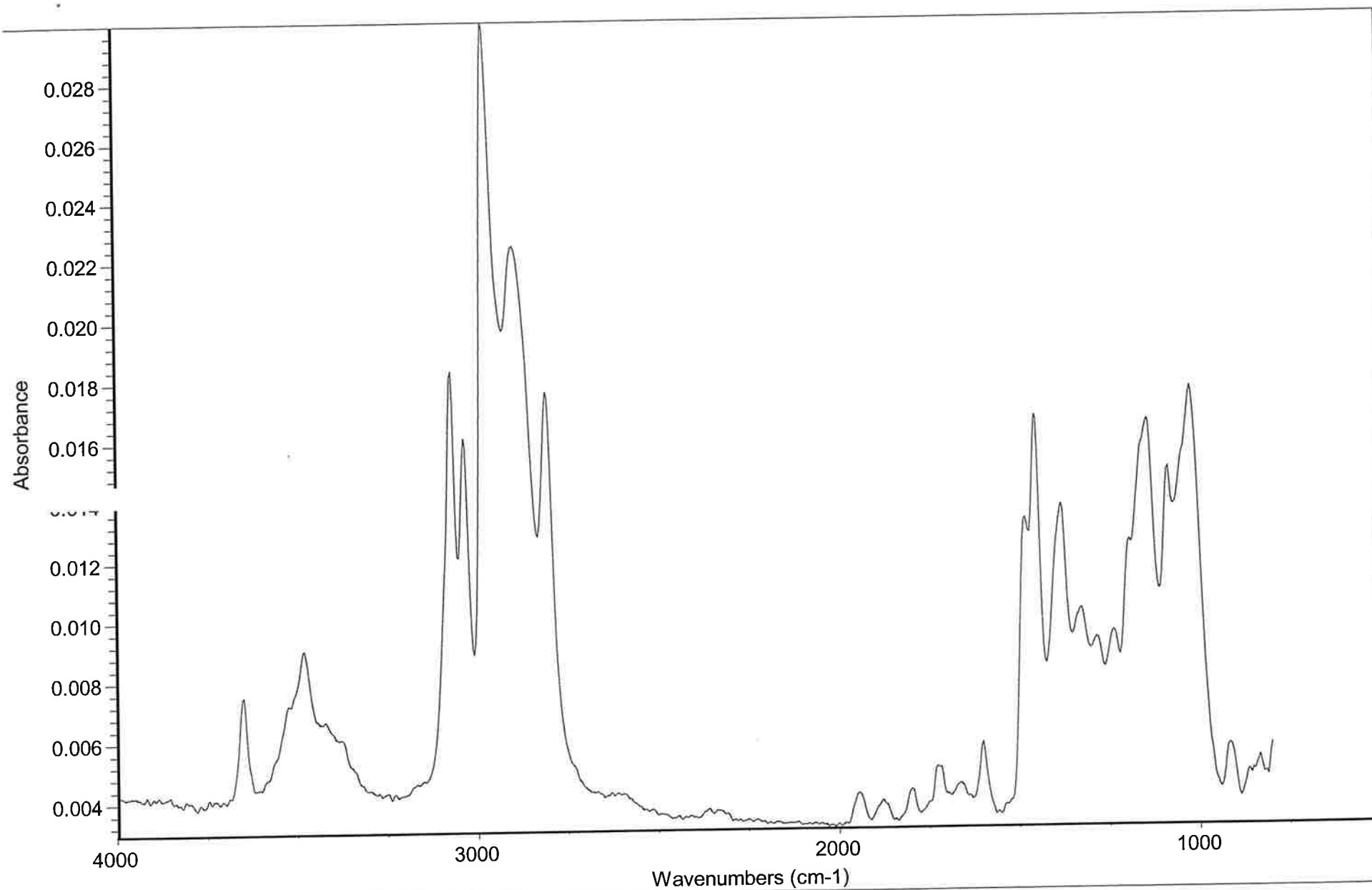
120 - 270 °C @ 70 °C / min

Scans: 1

UNK # 1

Resolution: Unknown

0.5 N NaOH > CHCl₃

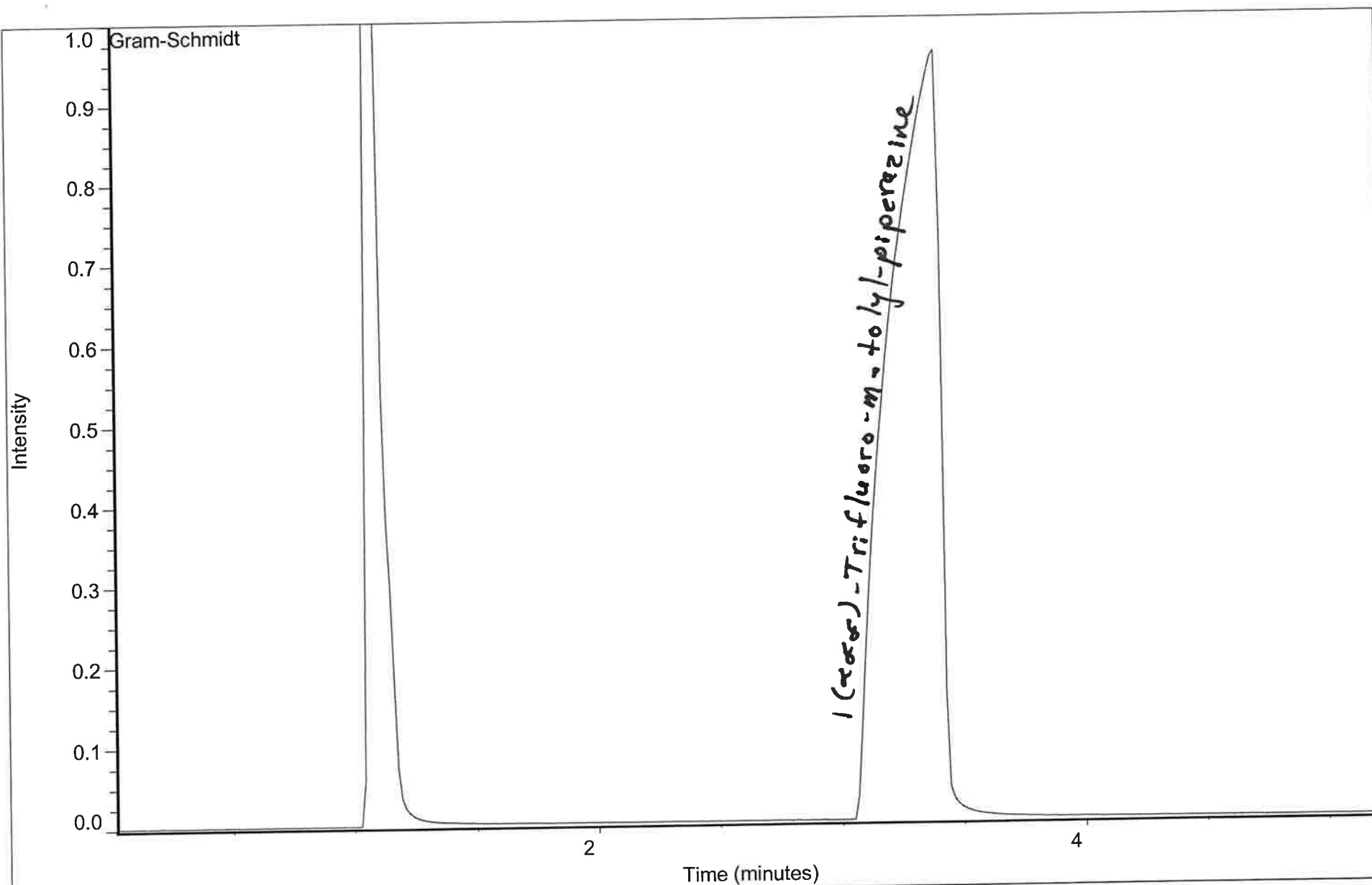


GBE UNK#1 0.5N NAOH>CHCL3 PSEUDOEPHEDRINE

IR #1

88 E

Collection time: Thu Aug 23 08:43:21 2001



Date: Wed Feb 06 01:36:21 2036

Coadded spectrum: 3.10 - 3.41 min.

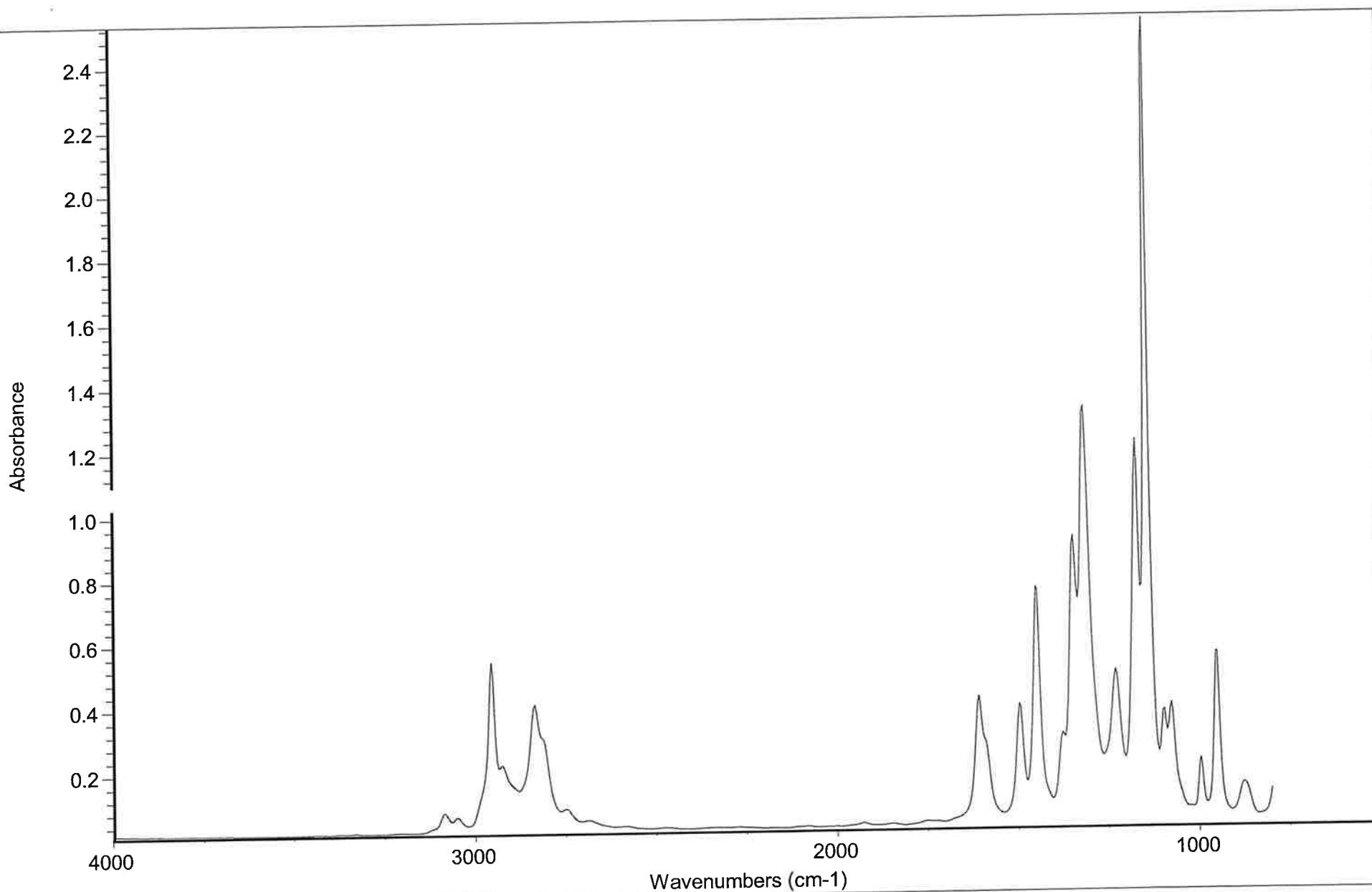
120 - 270°C @ 702/min

Scans: 88

UNK #2 XBE

Resolution: 8.000

0.5N NaOH > CHCl₃

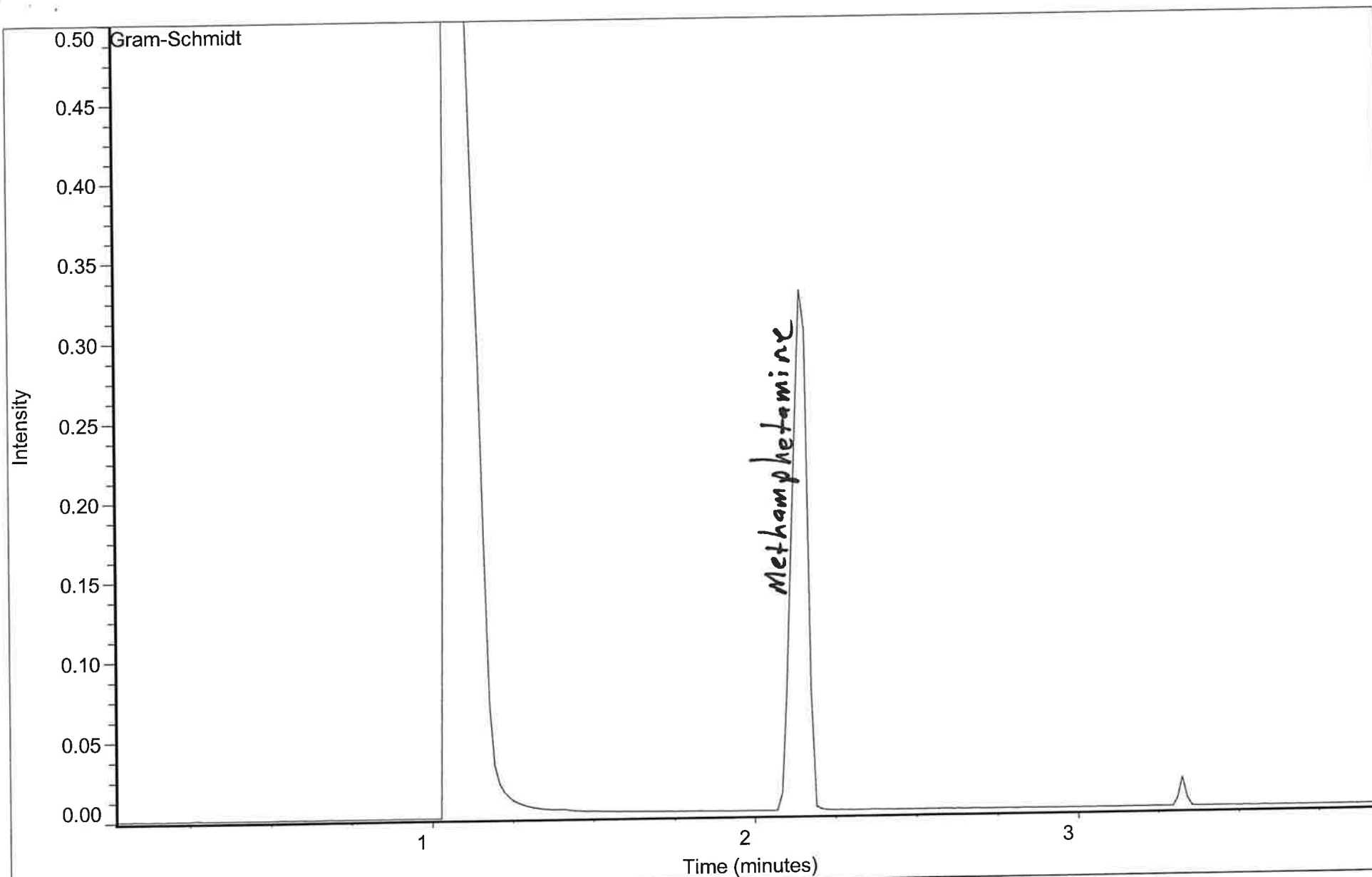


GBE UNKNOWN #2 0.5N NAOH>CHCL3 1(~~1,1,1~~)-trIFLUORO-M-TOLYL-PIPERAZINE

IR #1

GBE

Collection time: Thu Aug 23 09:06:08 2001



Date: Wed Feb 06 00:40:52 2036

Coadded spectrum: 2.10 - 2.18 min.

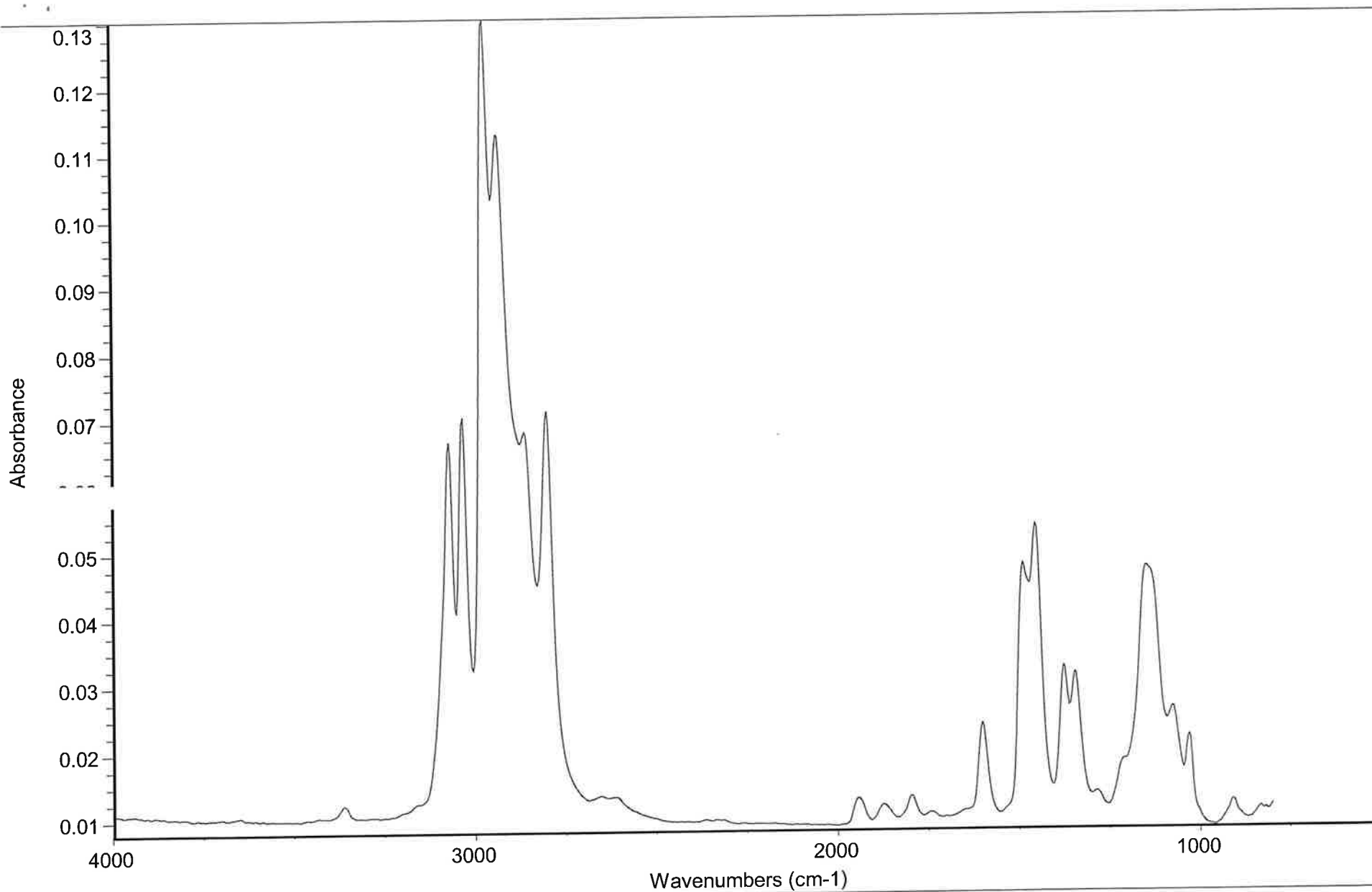
120 - 270c @ 70c/min

Scans: 24

UNK # 3 AB E

Resolution: 8.000

0.5N NaOH > CHCl₃

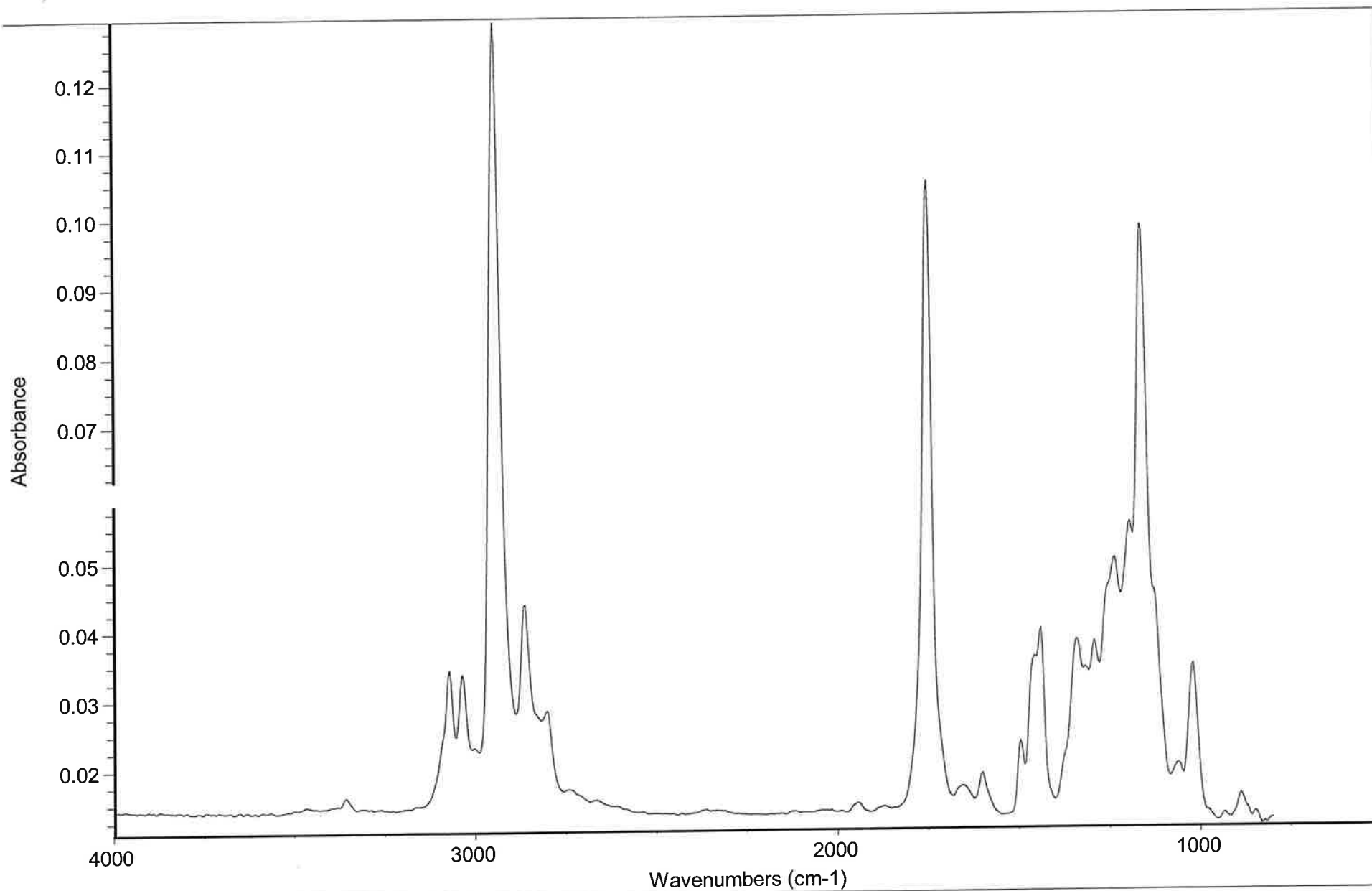


GBE UNKNOWN #3 0.5N NAOH>CHCL3 METHAMPHETAMINE

IR #1

GBE

Collection time: Thu Aug 23 08:30:48 2001

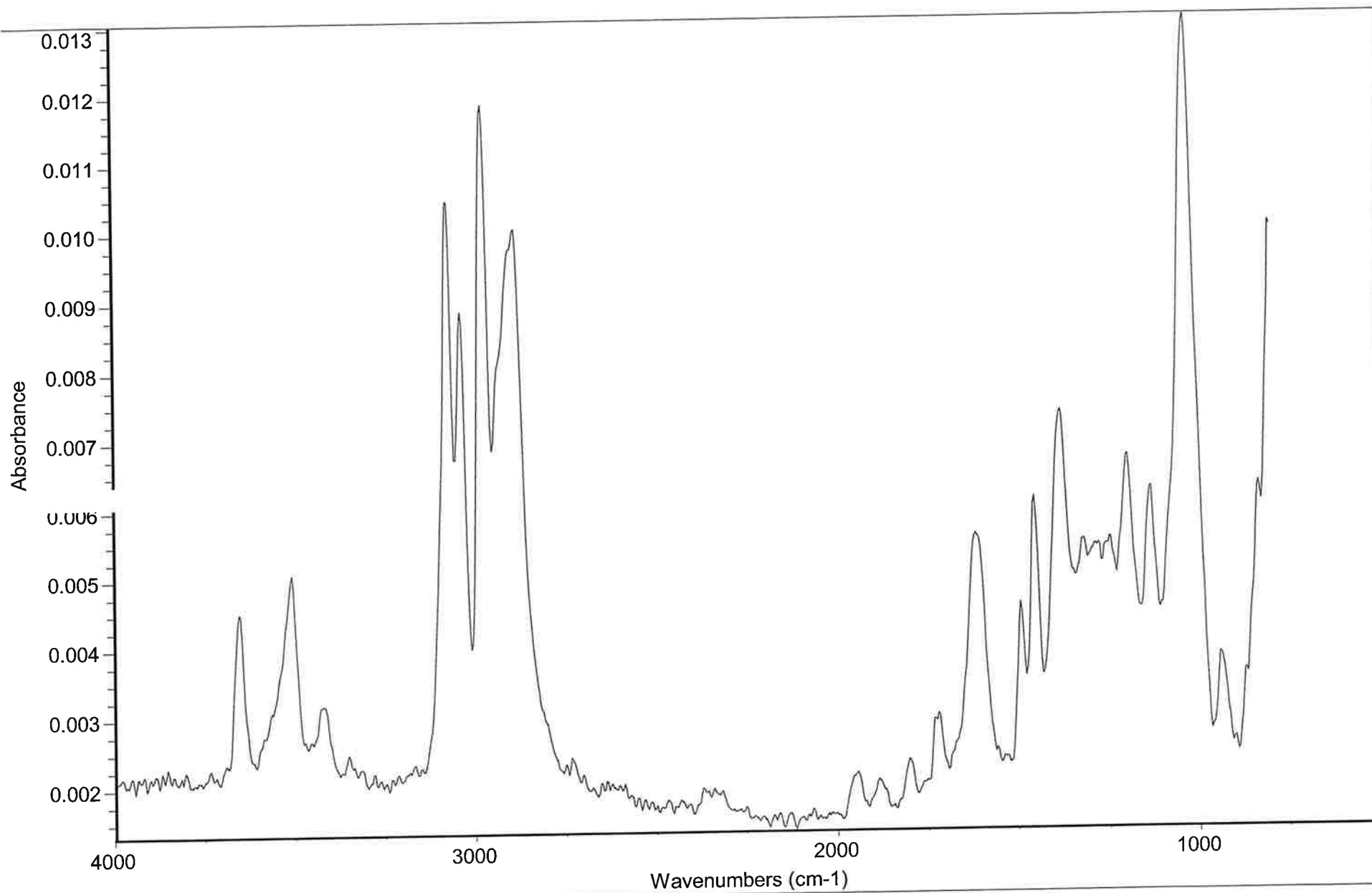


TAB Unkown #1 Bicarb\CHCL3

IR #1

Methylphenidate HCl

Collection time: Thu Aug 23 12:56:11 2001

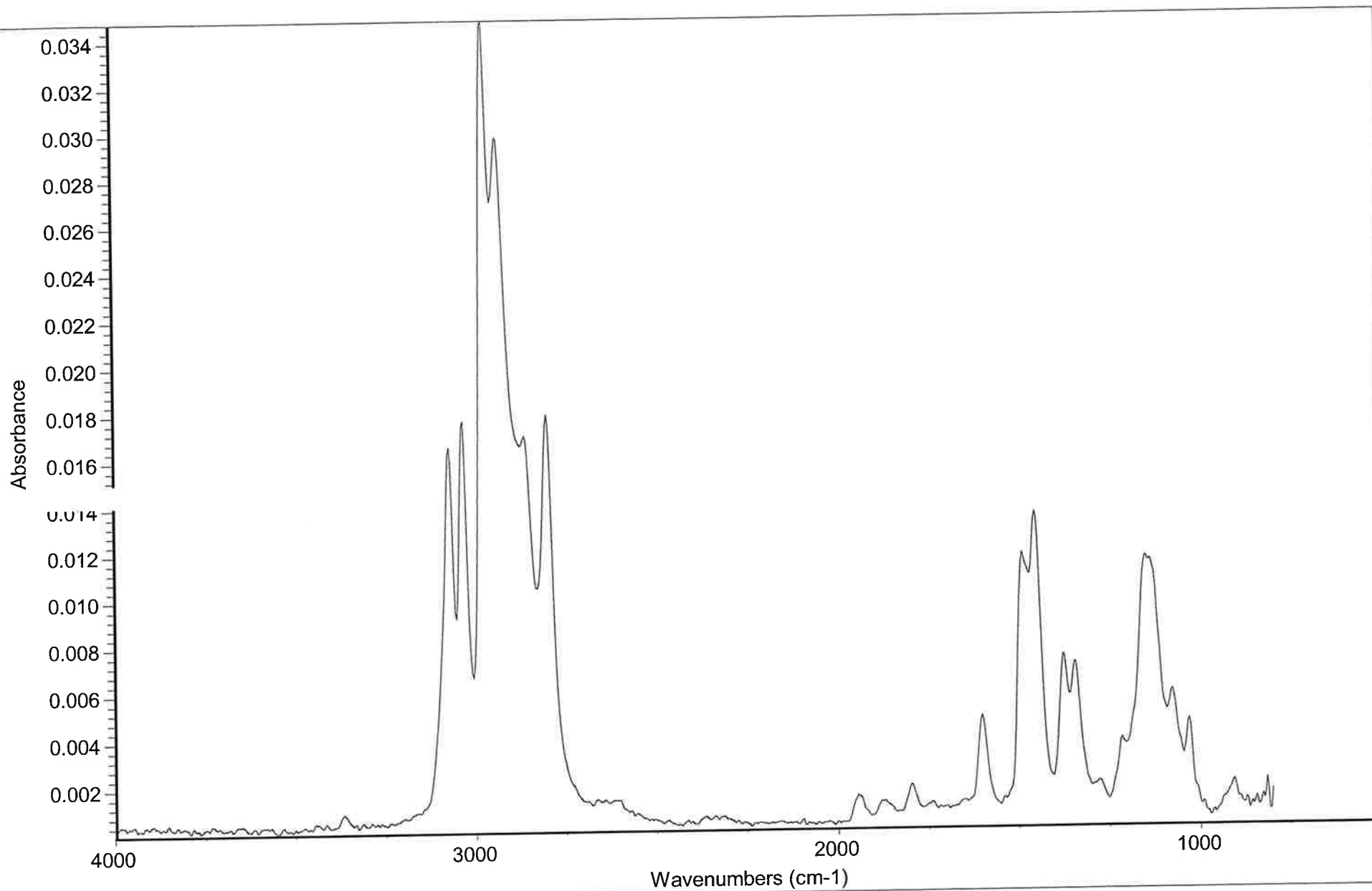


TAB Unknown #2 Bicarb\CHCL3

IR #1

Cathine (D-norpseudoephedrine)

Collection time: Thu Aug 23 13:17:57 2001

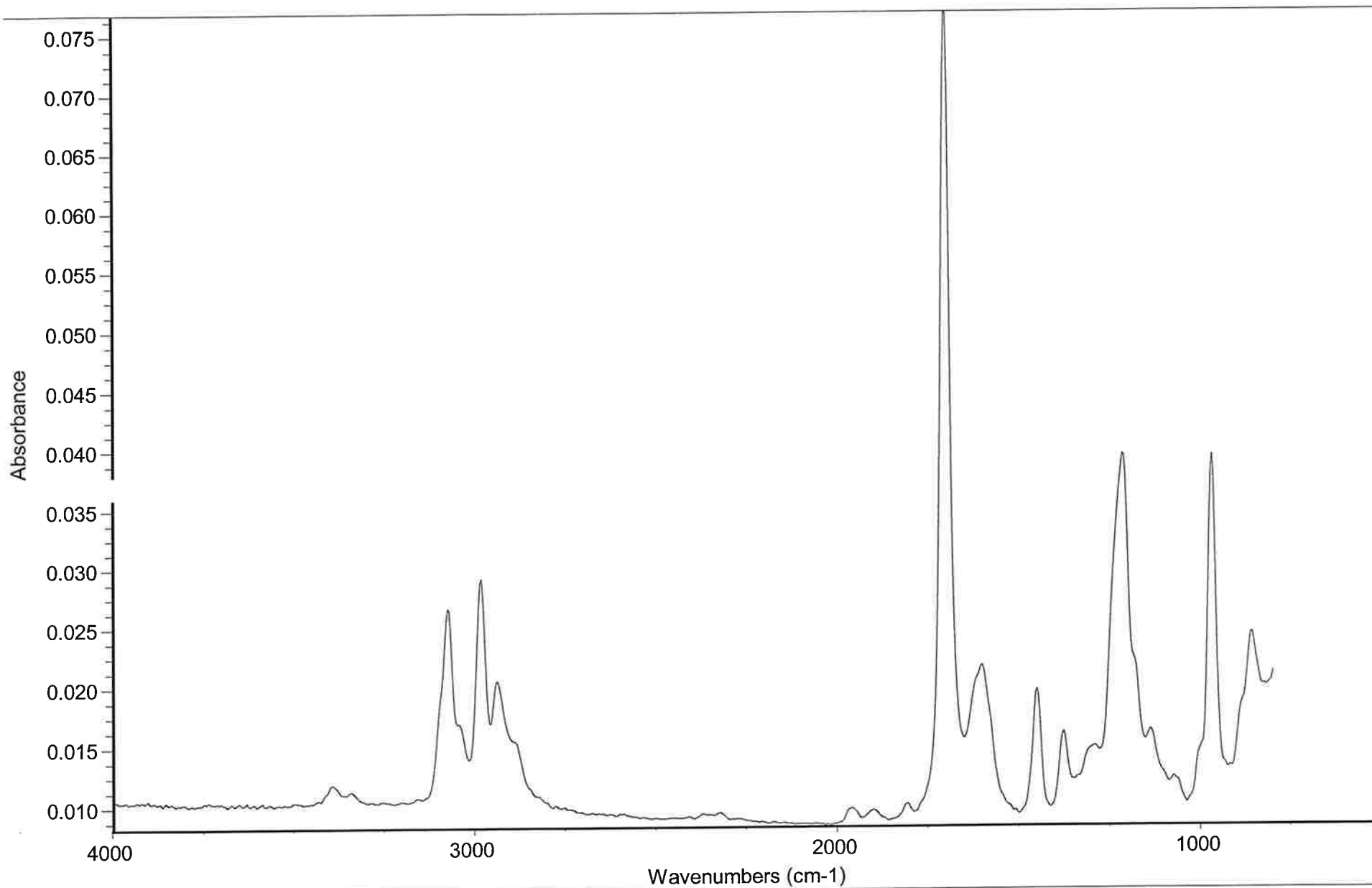


TAB Unkown #3 Bicarb\CHCL3

IR #1

Methamphetamine

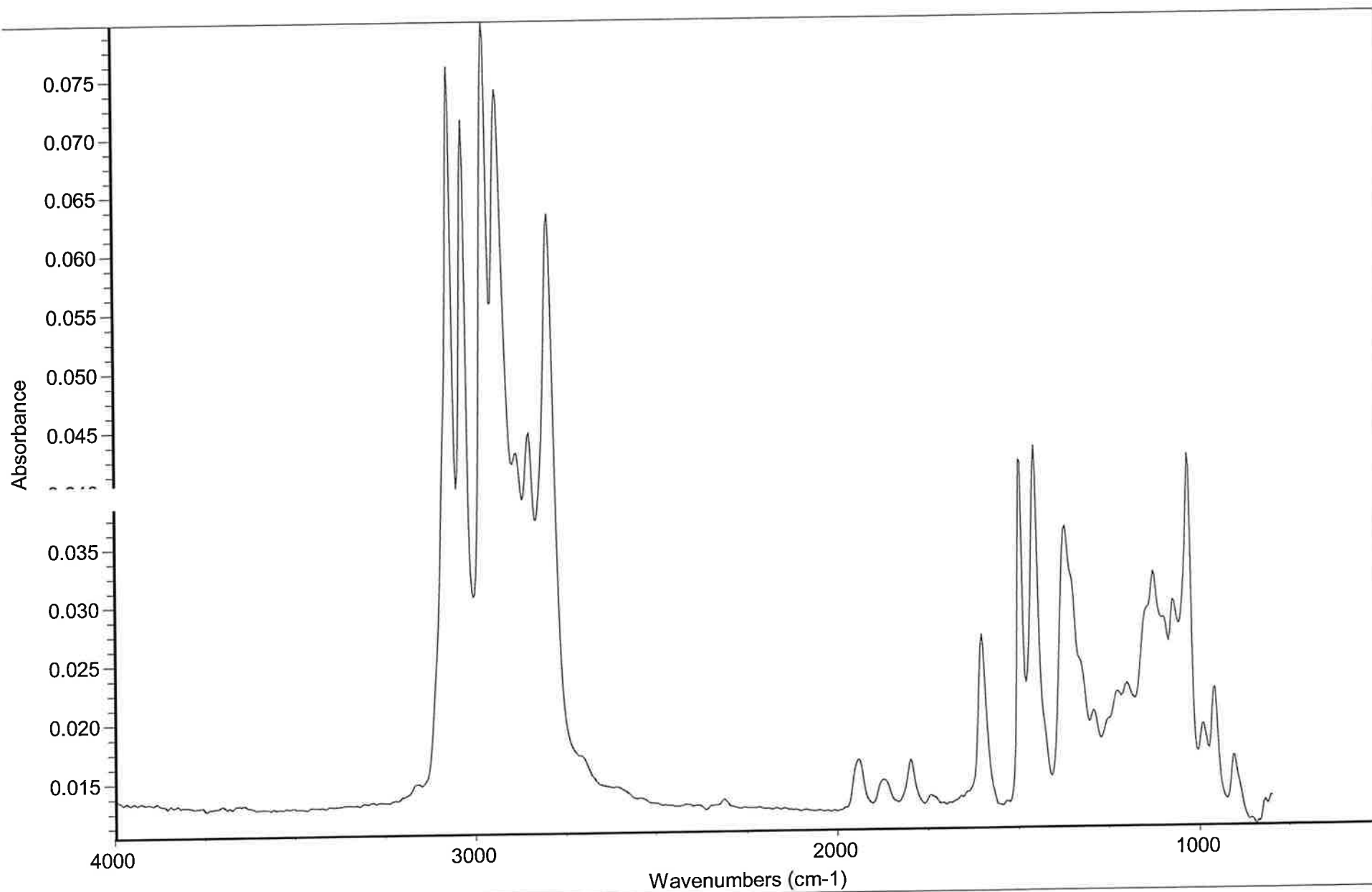
Collection time: Thu Aug 23 13:27:07 2001



CATHINONE GLEN JAY GLENN UNK STD #2

IR #1

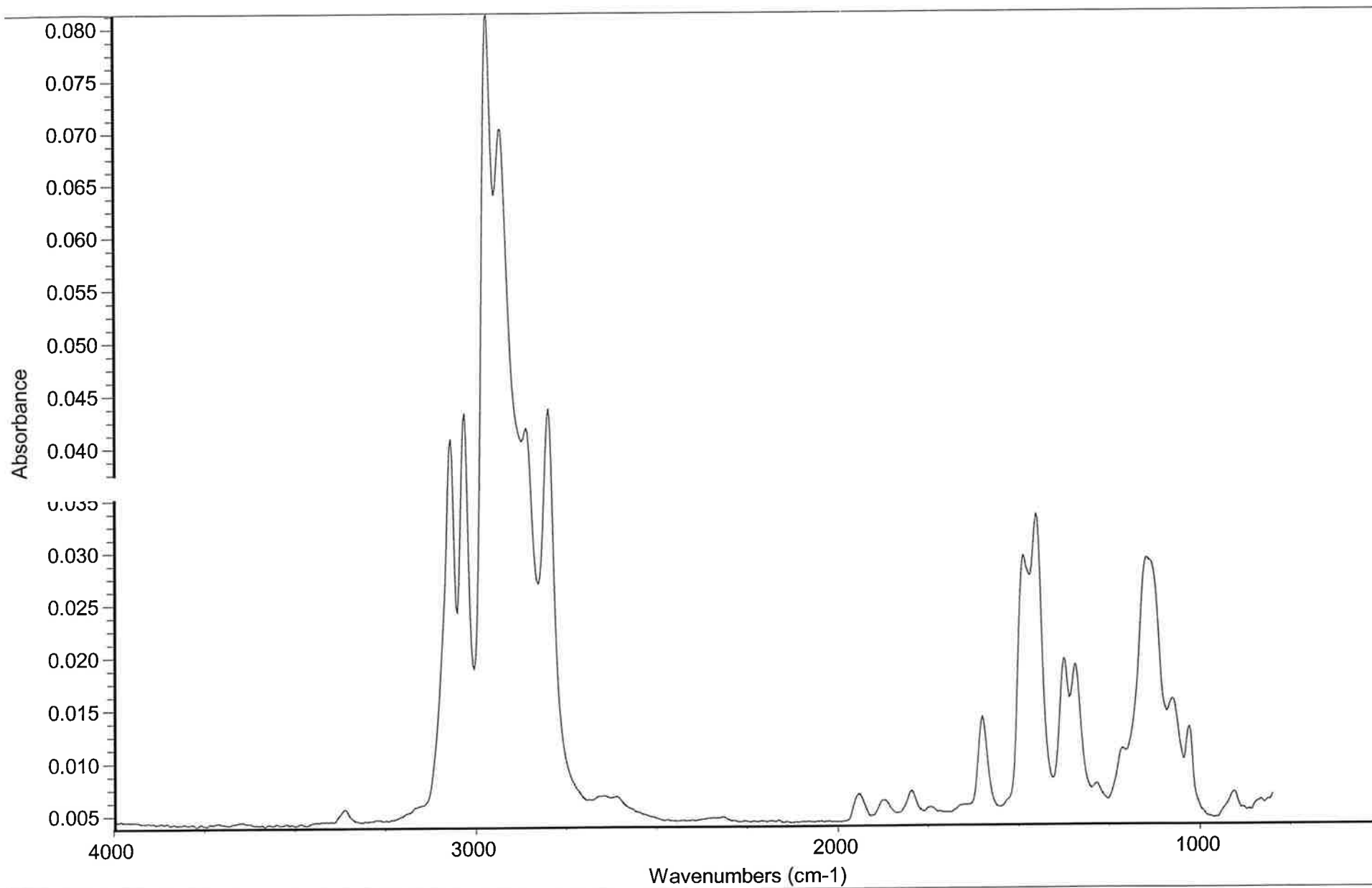
Collection time: Wed Aug 29 10:14:12 2001



BENZPHETAMINE GLEN JAY GLENN UNK STD #1

IR #1

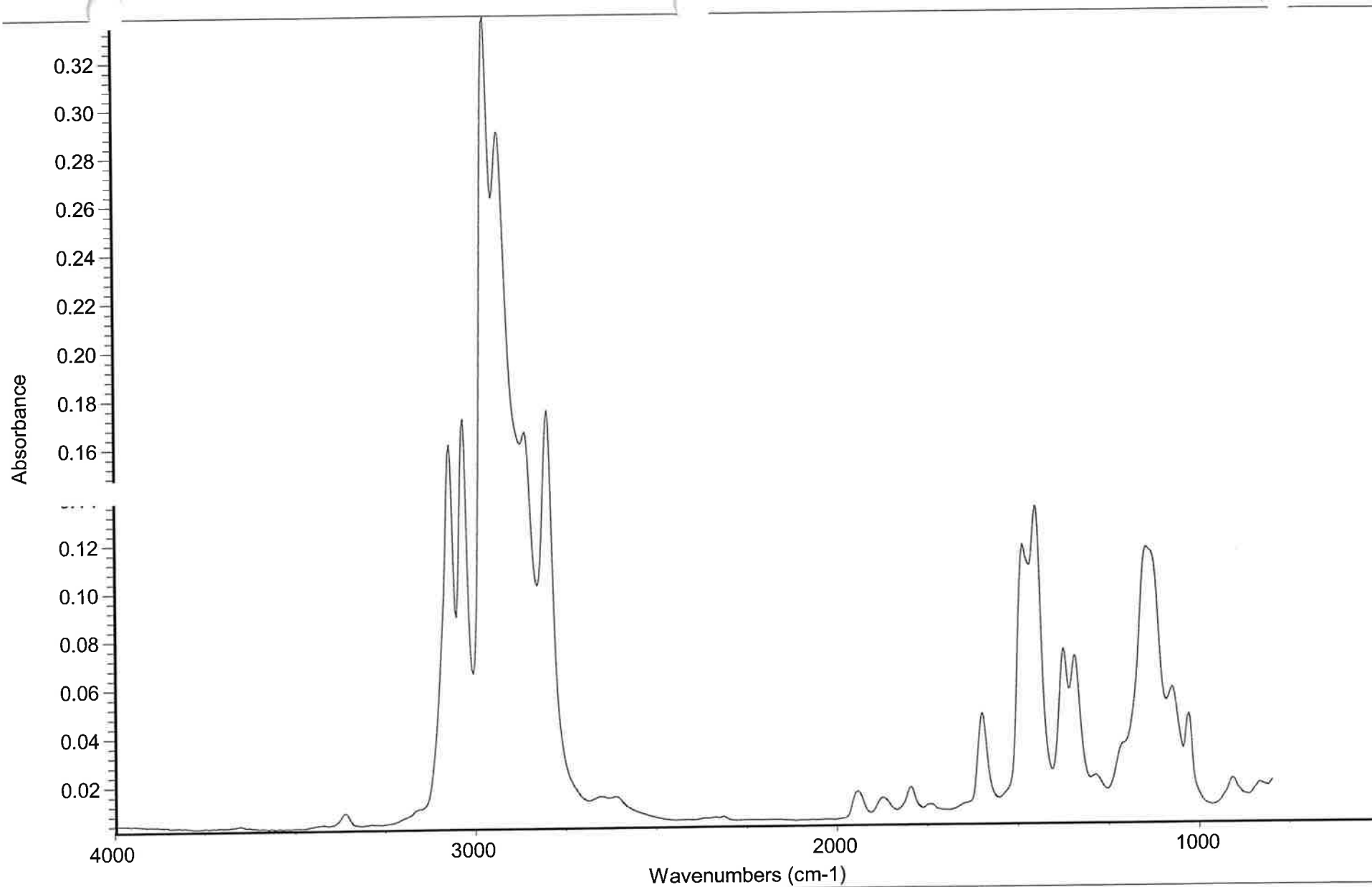
Collection time: Wed Aug 29 10:04:25 2001



METHAMPHETAMINE GLEN JAY GLENN UNK STD #3

IR #1

Collection time: Wed Aug 29 10:26:56 2001

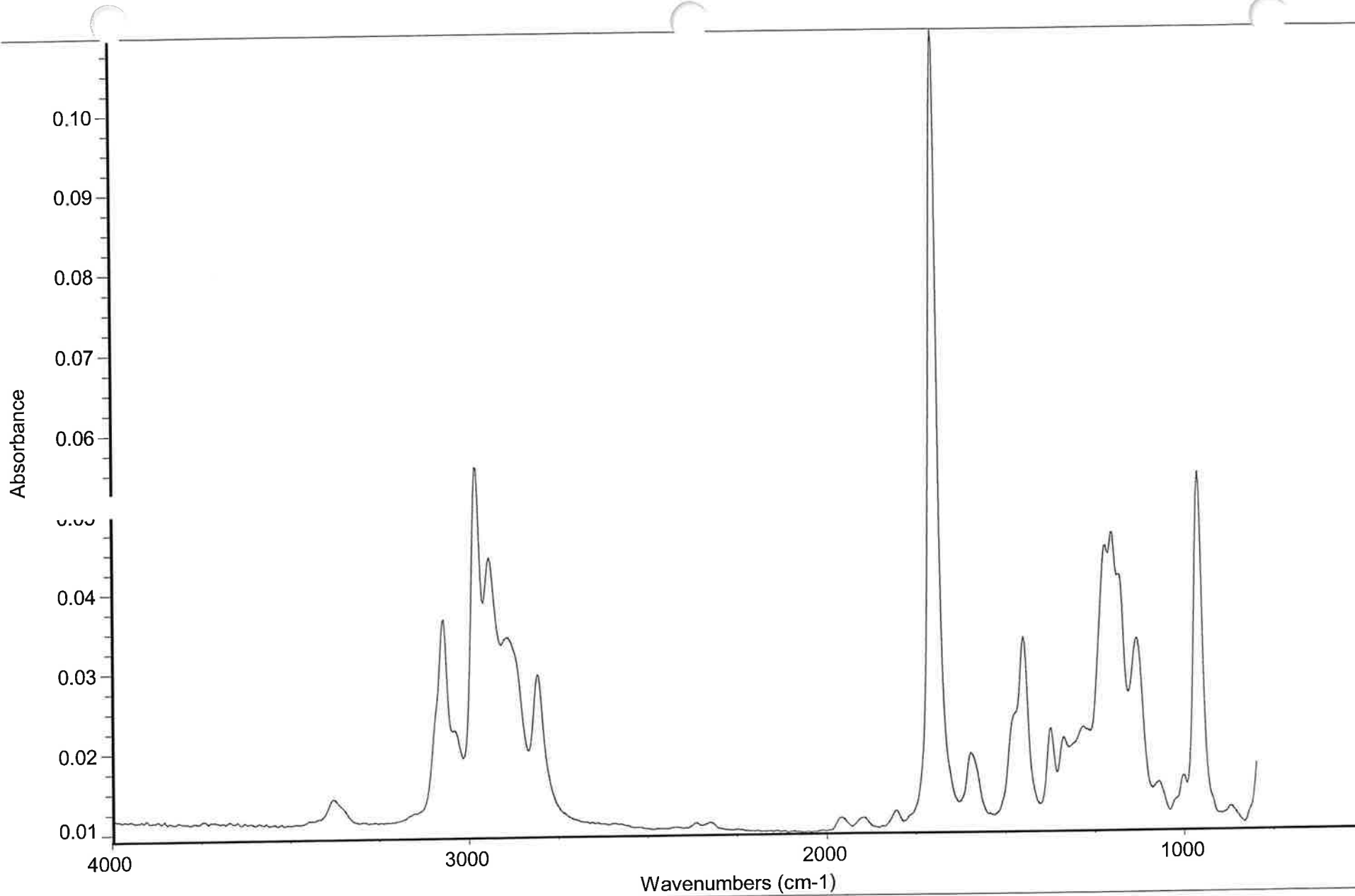


Methamphetamine B>chcl3 ext

IR #1

(Q) (#3)

Collection time: Wed Aug 29 11:01:38 2001

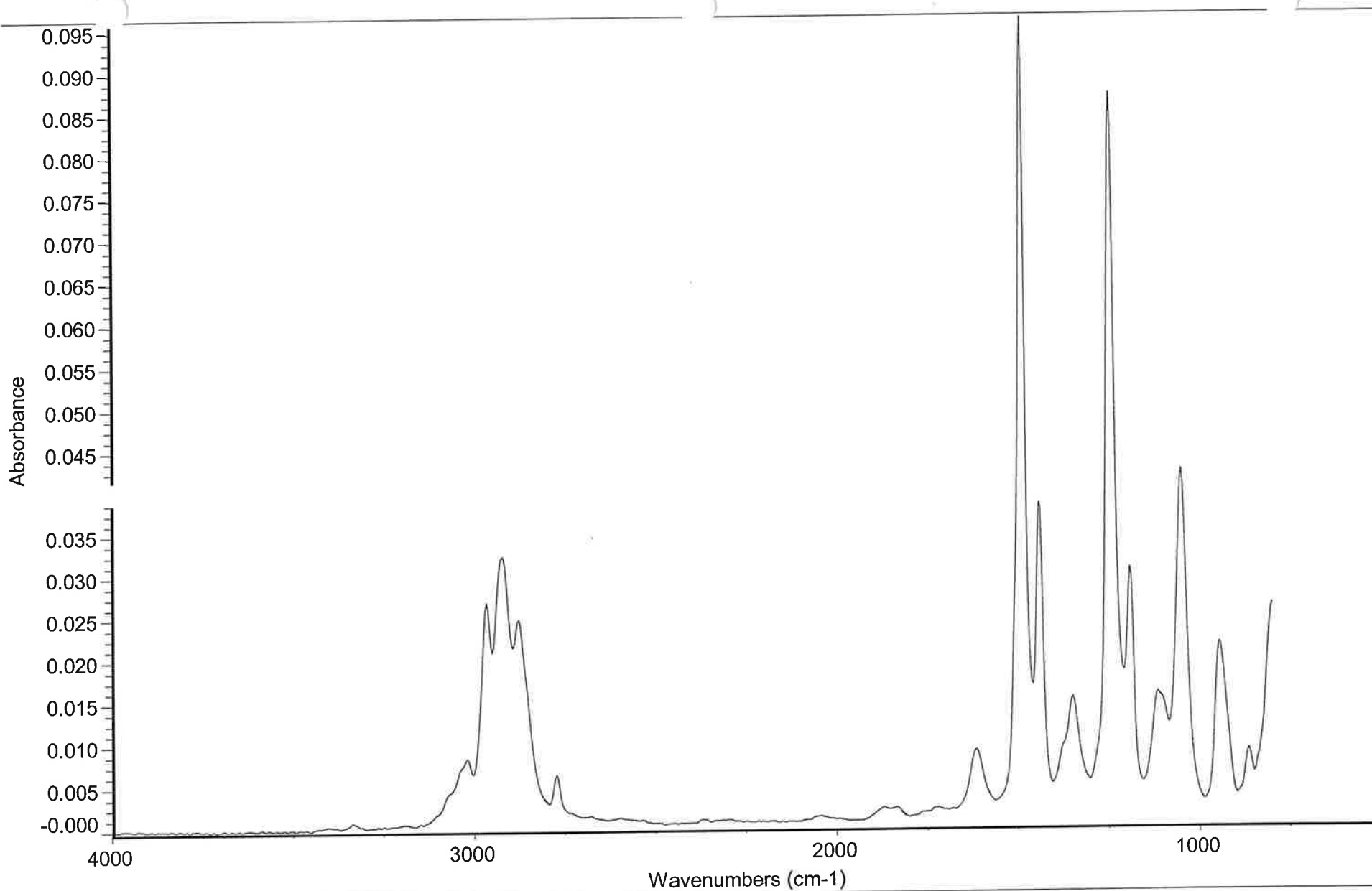


methcathinone

IR #1

OP #2

Collection time: Wed Aug 29 10:55:03 2001

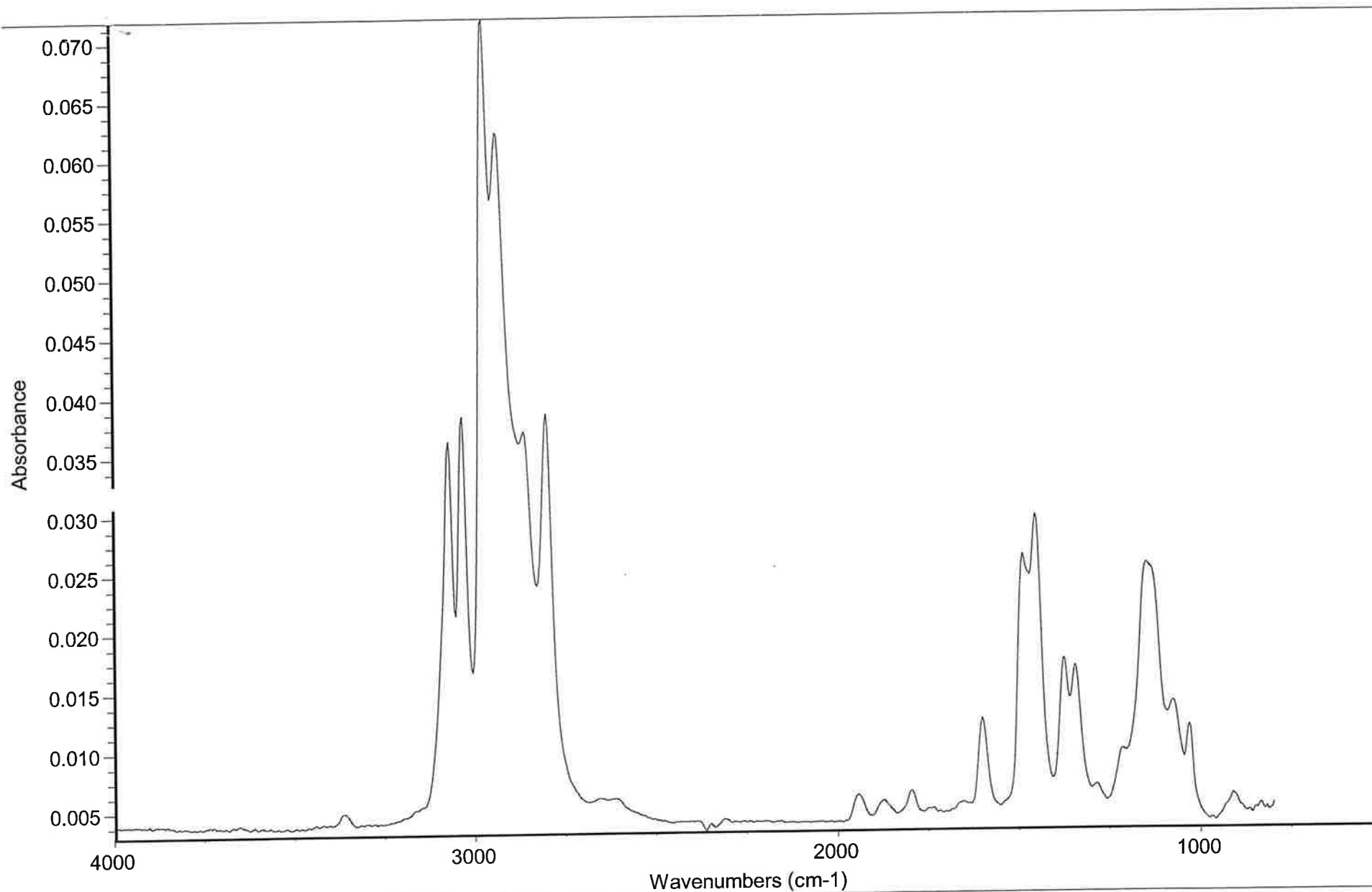


Coadded spectrum: 3.01 - 3.02 min.

IR #1 (MDA) *Methylenedioxymphetamine* 3,4

(#1)
(UK)

Collection time: Wed Aug 29 10:46:45 2001

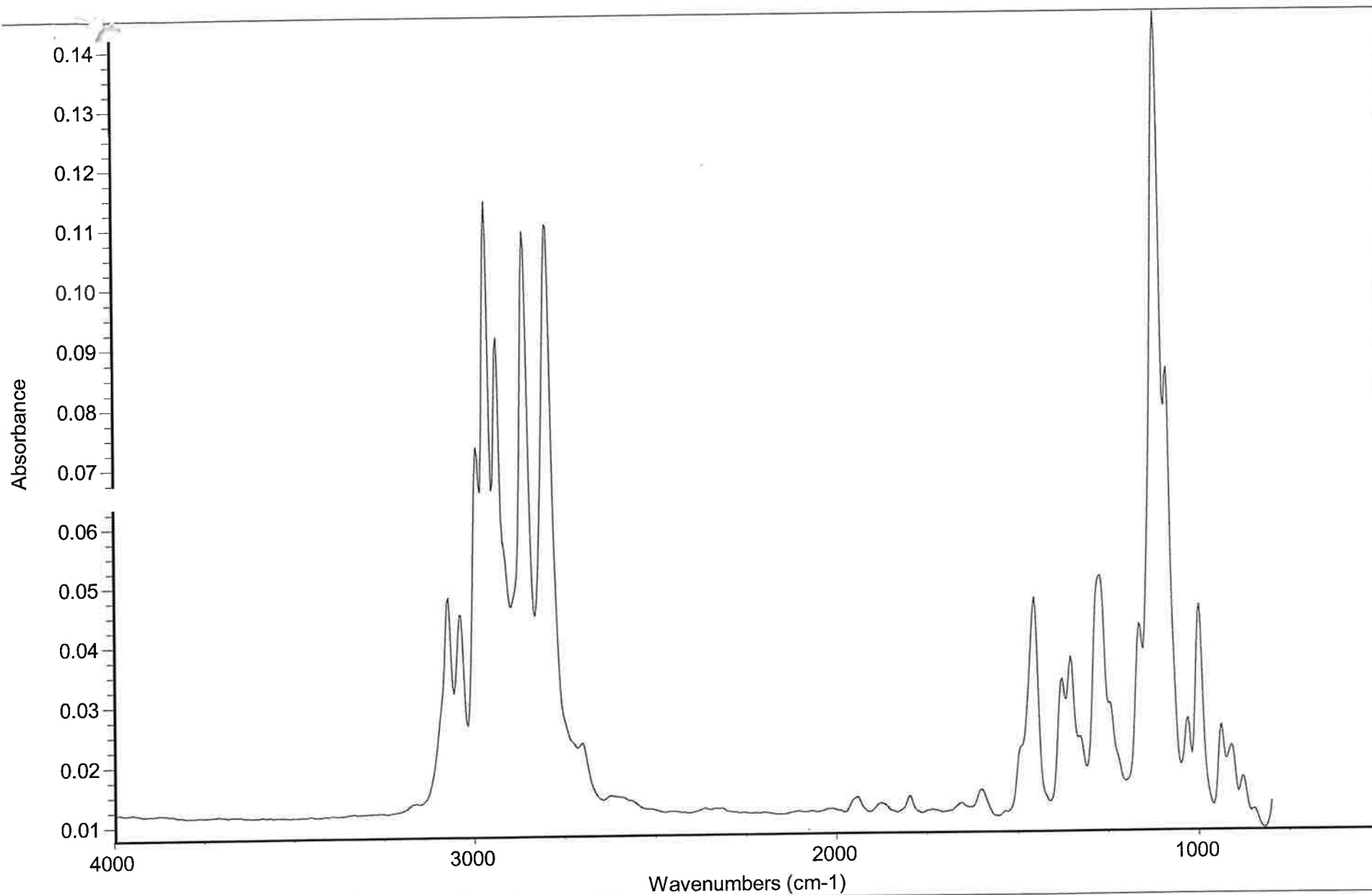


kjc unknown#1 methamphetamine

IR #1

x9c

Collection time: Wed Aug 29 13:32:54 2001



kjc unknowm 2 - phendimetrazine

IR #1

Collection time: Wed Aug 29 15:02:29 2001

49C

Absorbance

0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002

4000

3000

2000

1000

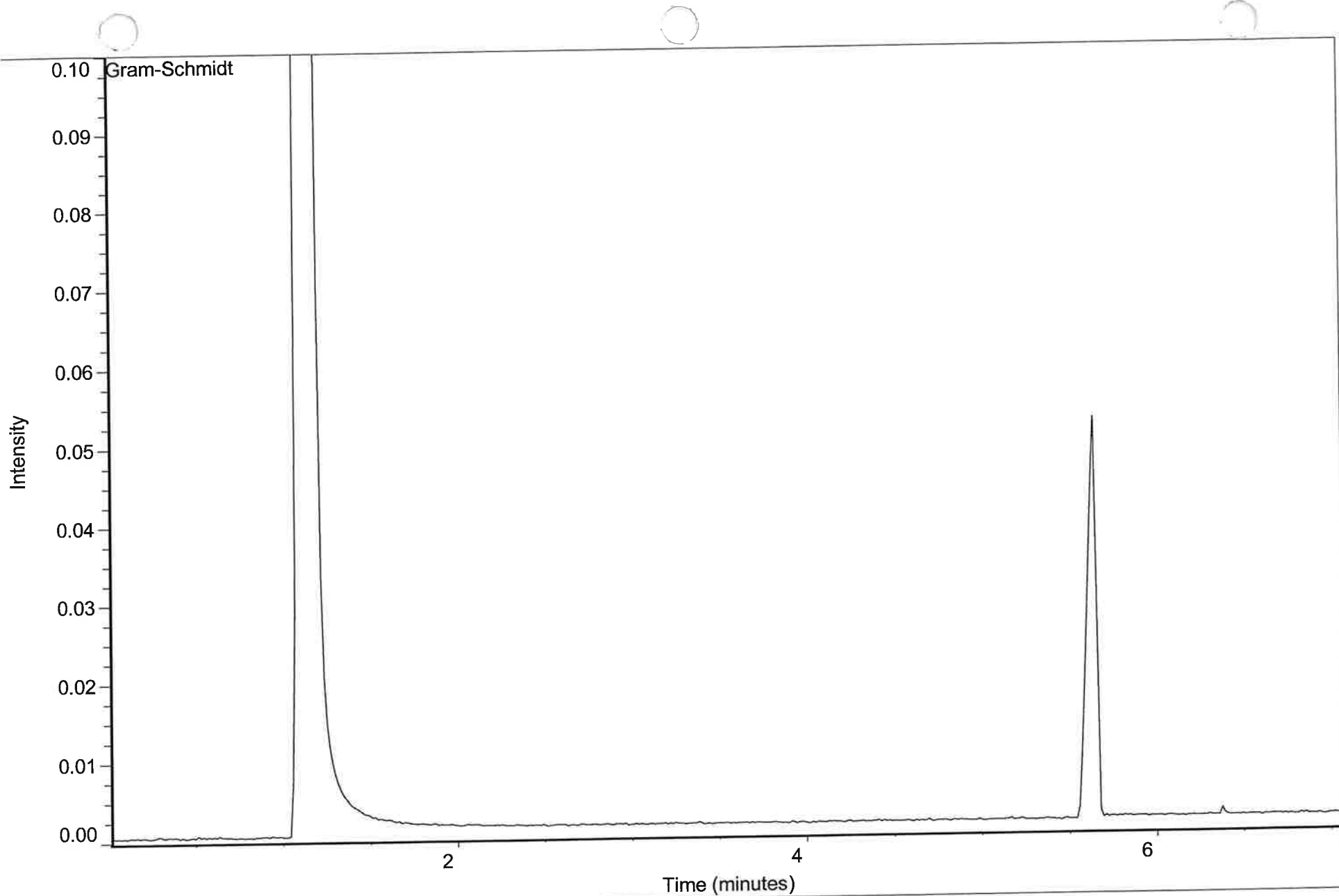
Wavenumbers (cm-1)

kjc#3 amphetamine

IR #1

K9C

Collection time: Wed Aug 29 14:53:19 2001



Coadded spectrum: 5.57 - 5.66 min.

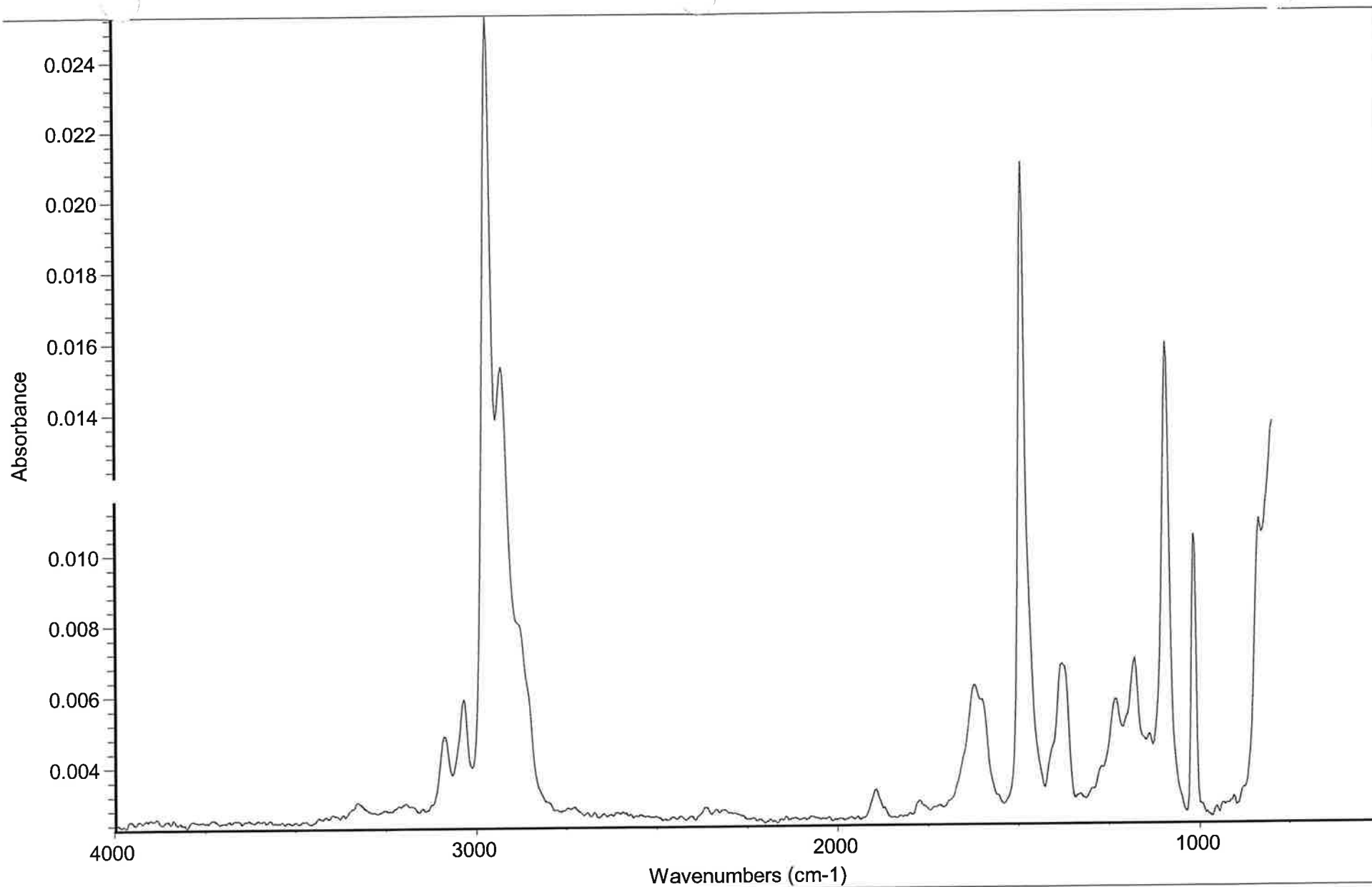
GC/FTIR

LJA #1

9-26-01

UJA

Collection time: Wed Feb 06 01:07:16 2036

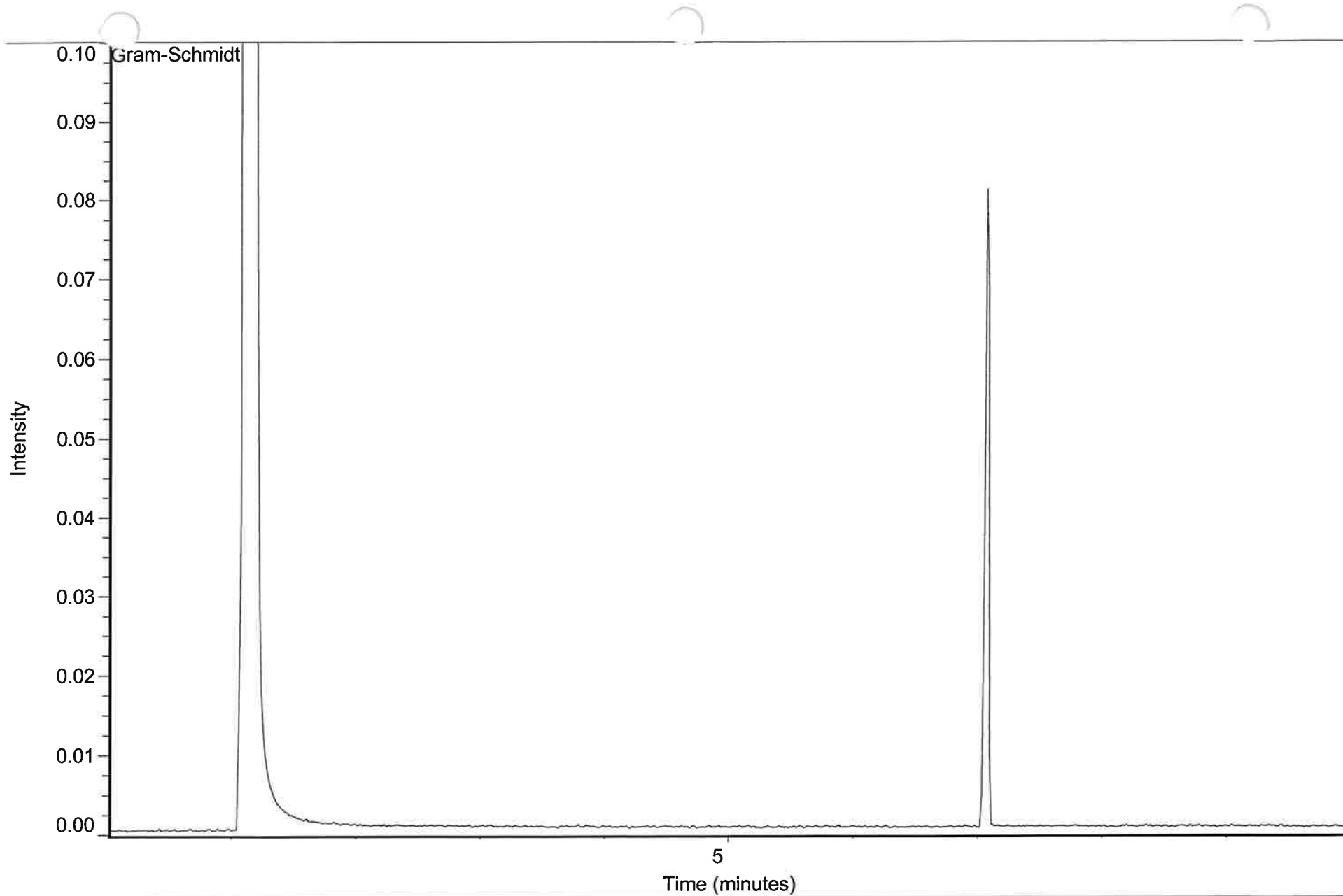


ljh#1 bicarb\chcl3

GC/FTIR *lyb*

chlorphentermine

Collection time: Wed Sep 26 14:47:27 2001



Gram-Schmidt

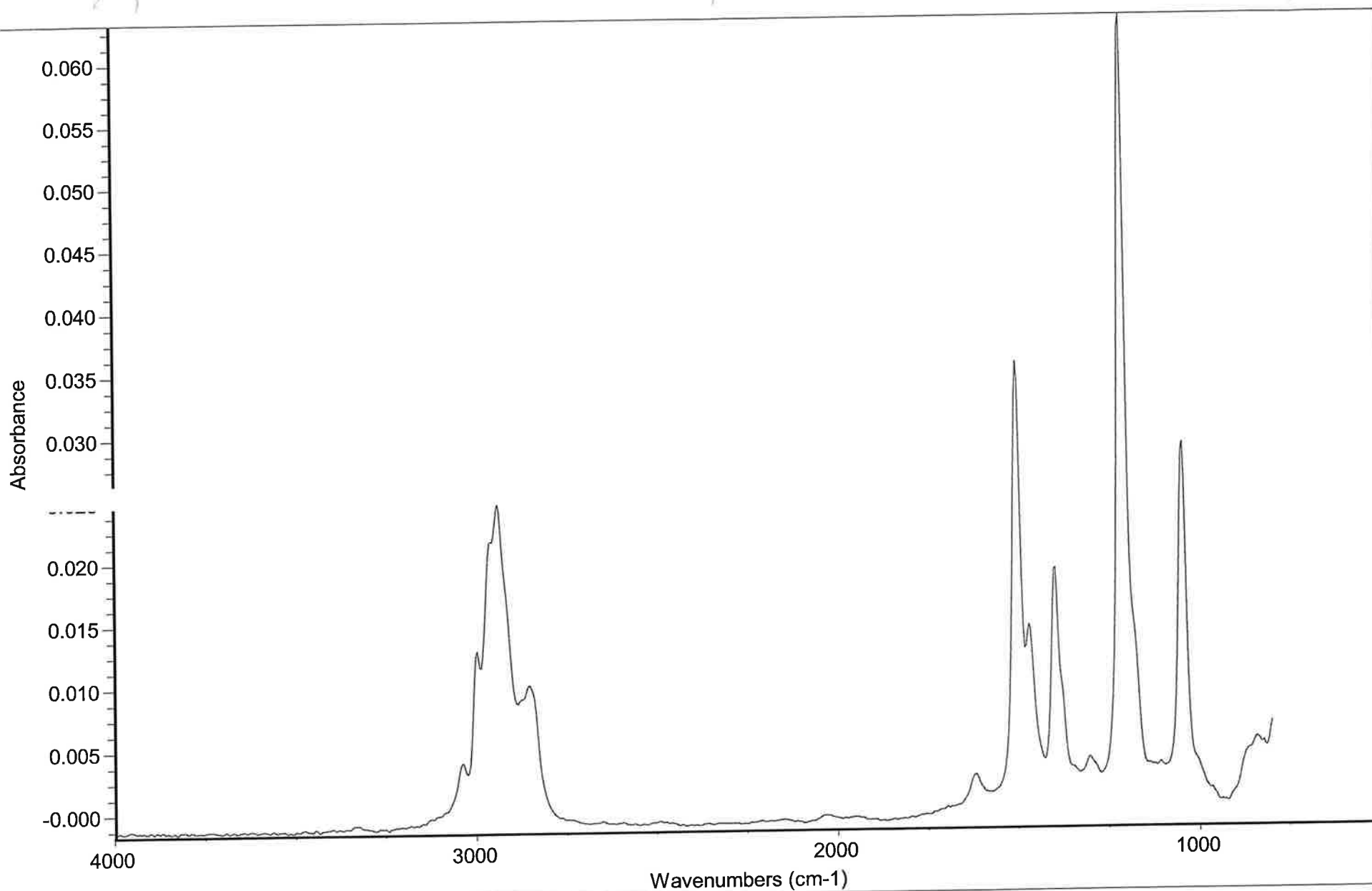
GC/FTIR

LJH 2

9-26-01

4918

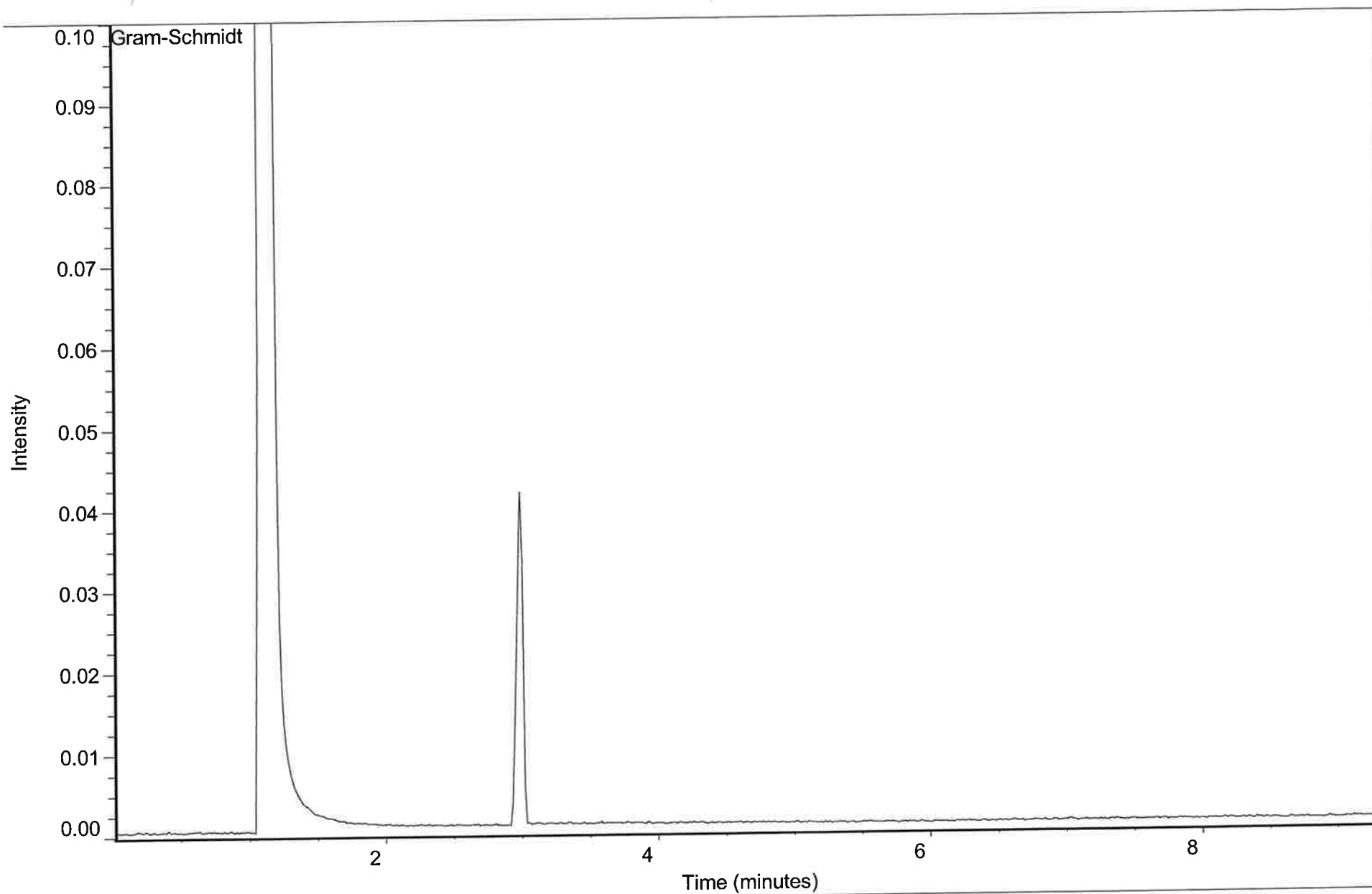
Collection time: Unknown



ljh2 bicarb\chcl3 ext
GC/FTIR *ljh*

4-Methyl-2,5-dimethoxyamphetamine

Collection time: Wed Sep 26 14:43:26 2001

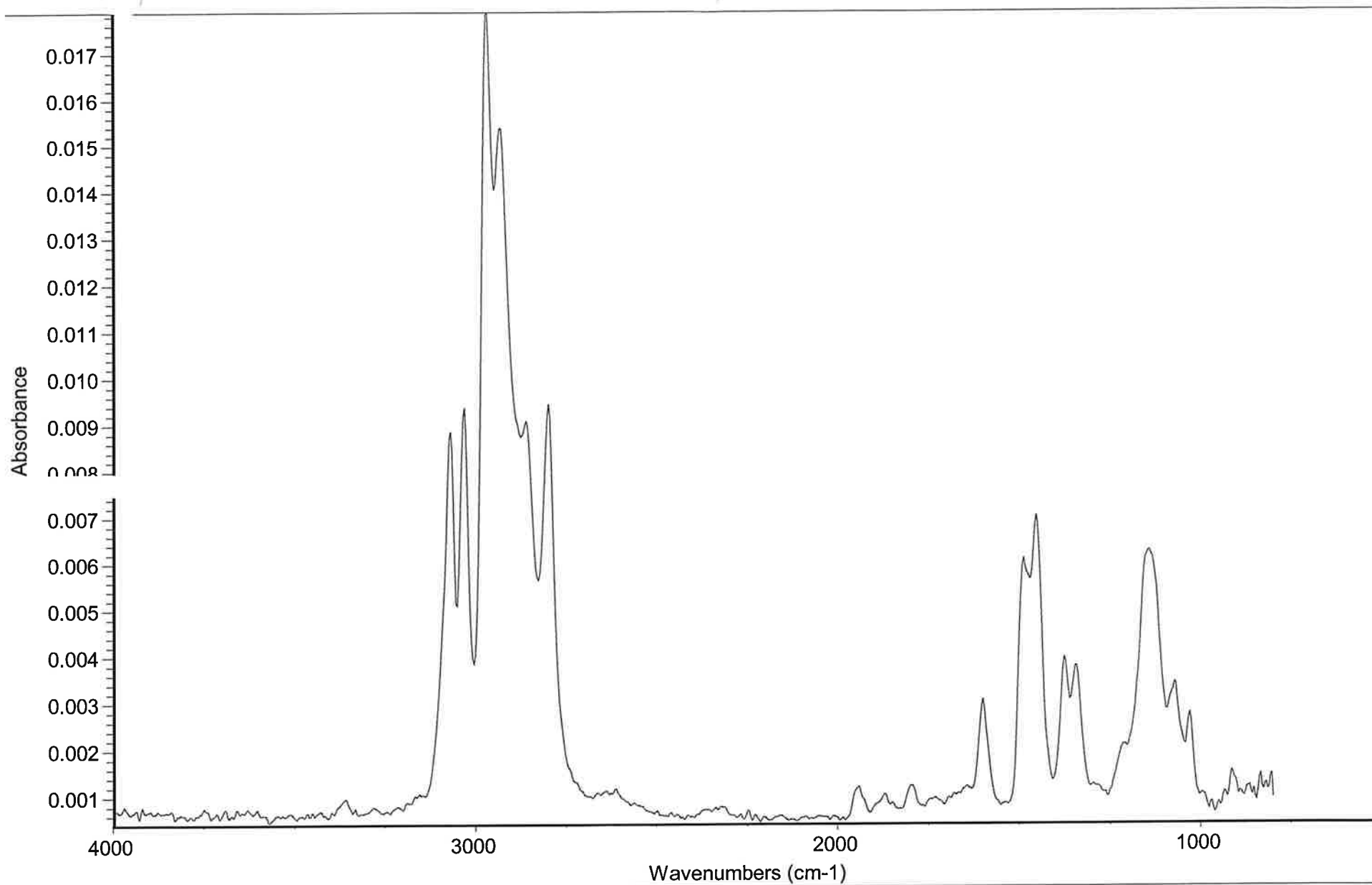


Linked spectrum at 0.936 min.

GC/FTIR

LJA #3
9-26-01
LJA

Collection time: Wed Feb 06 00:29:12 2036



ljh3 bicarb\chcl3 ext
GC/FTIR *ljh*

Methamphetamine

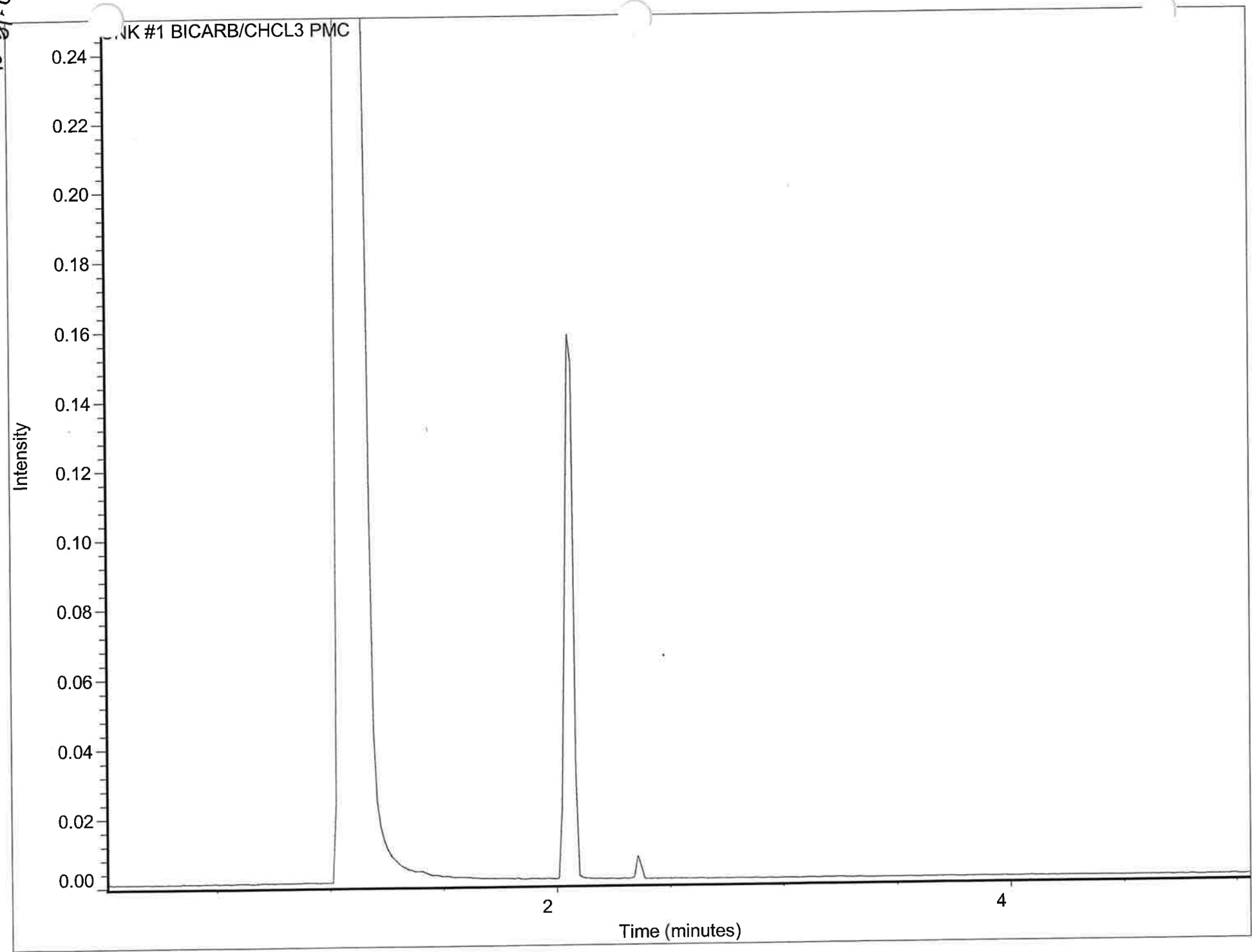
Collection time: Wed Sep 26 14:48:16 2001

Patti Choabie

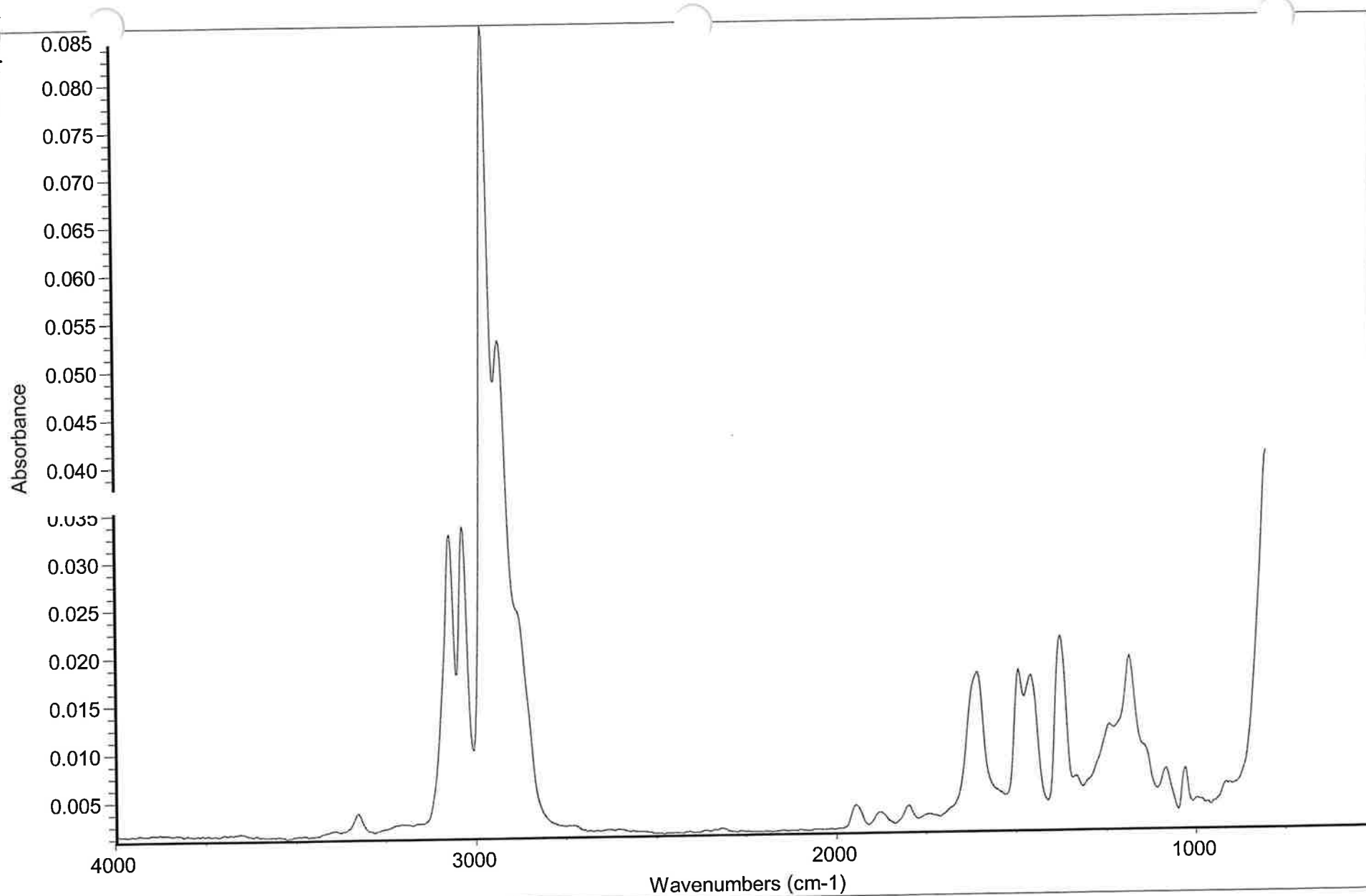
Unknown #1 - Phenamine from Remainer of DF#1
Unknown #2 - Phenmetrazine from " of PWT#2
Unknown #3 - Methamphetamine " " of DF#2
DF#3

PMC
10-31-01

IN K #1 BICARB/CHCL3 PMC



PMC
10-31-01

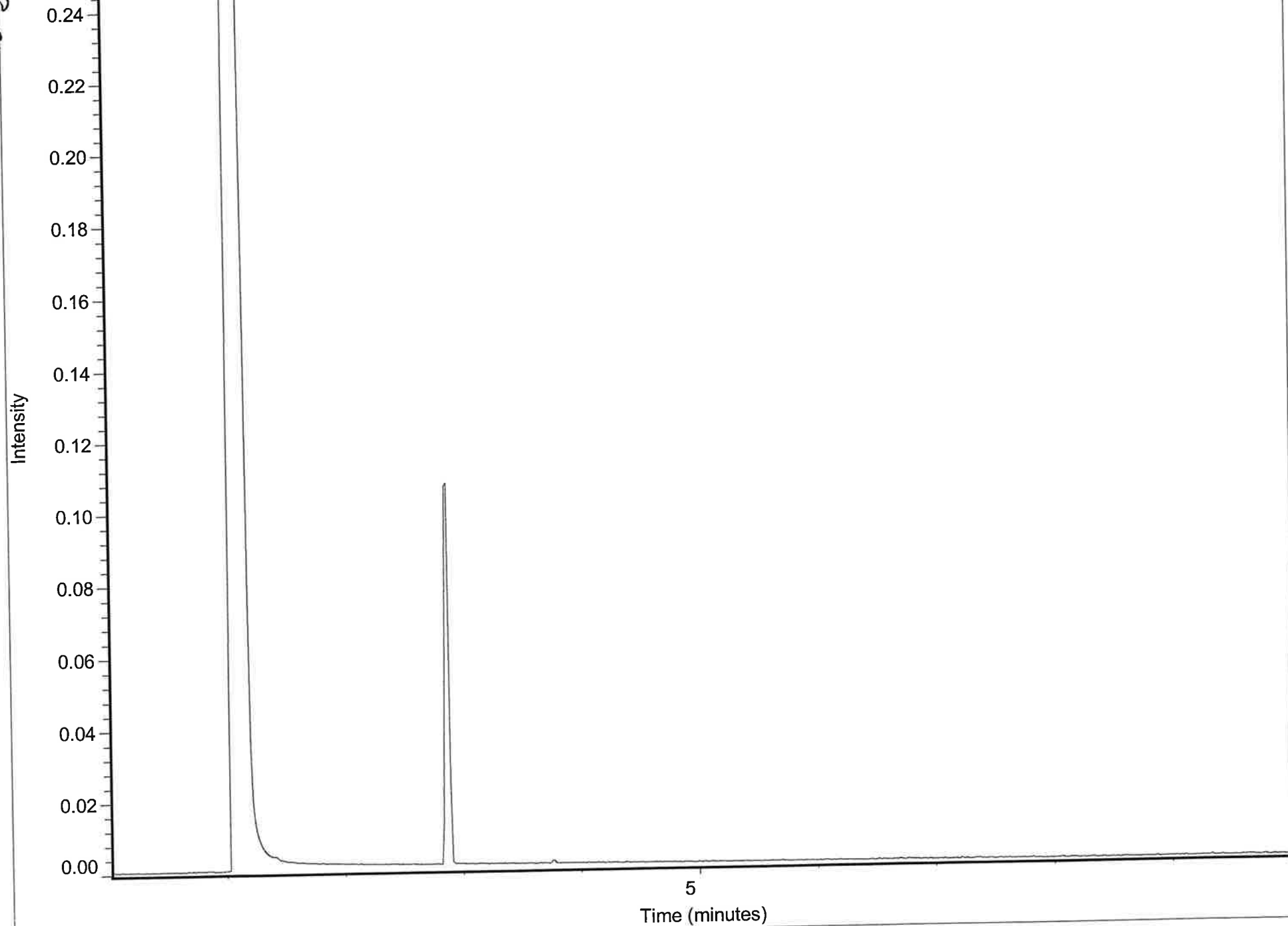


UNK #1 BICARB/CHCL3 PMC PHENTERMINE
GC/FTIR

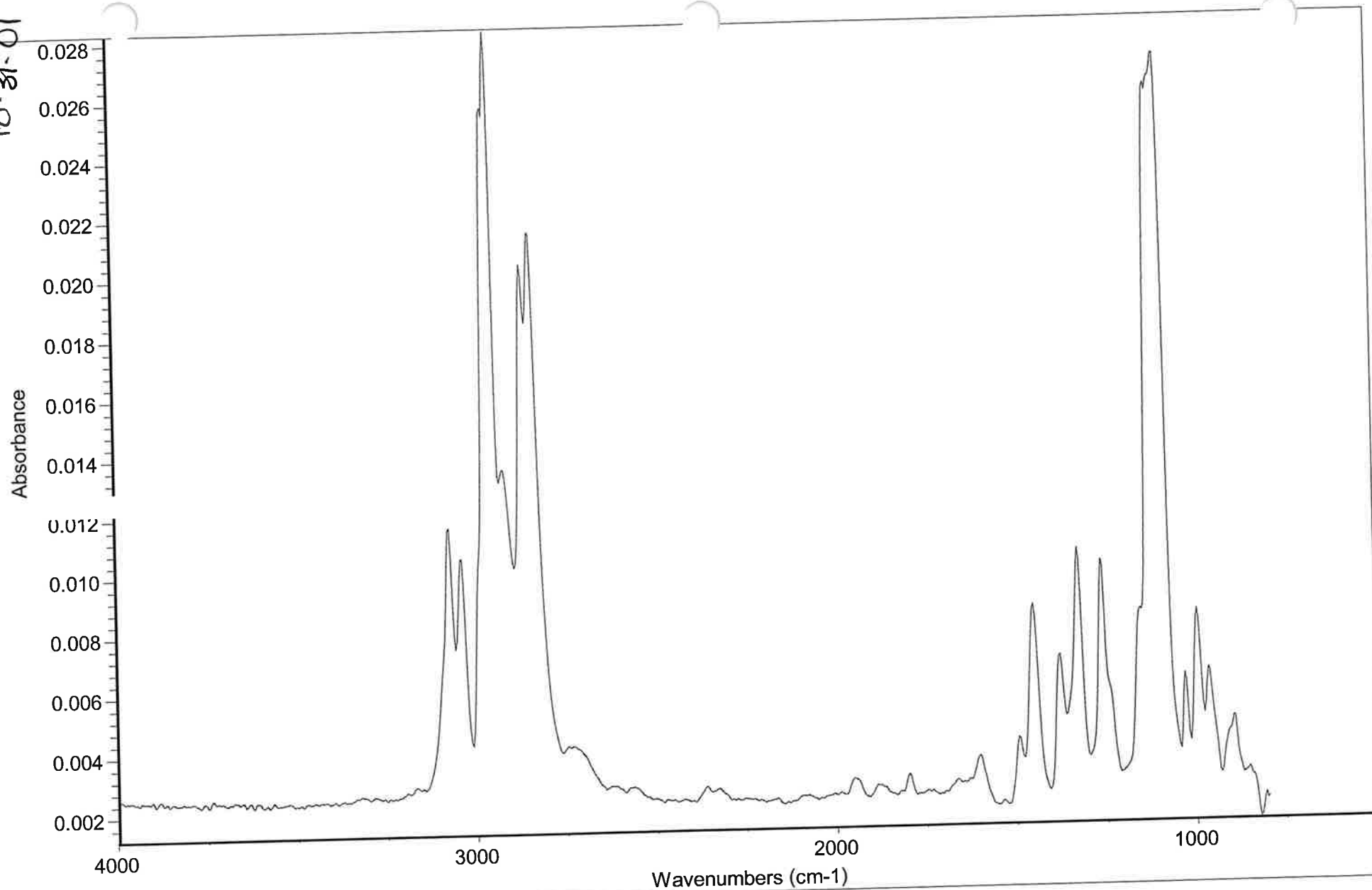
Collection time: Wed Oct 31 15:12:54 2001

PMU
10-21-01

UNK #2 BICARB/CHCL3 PMC

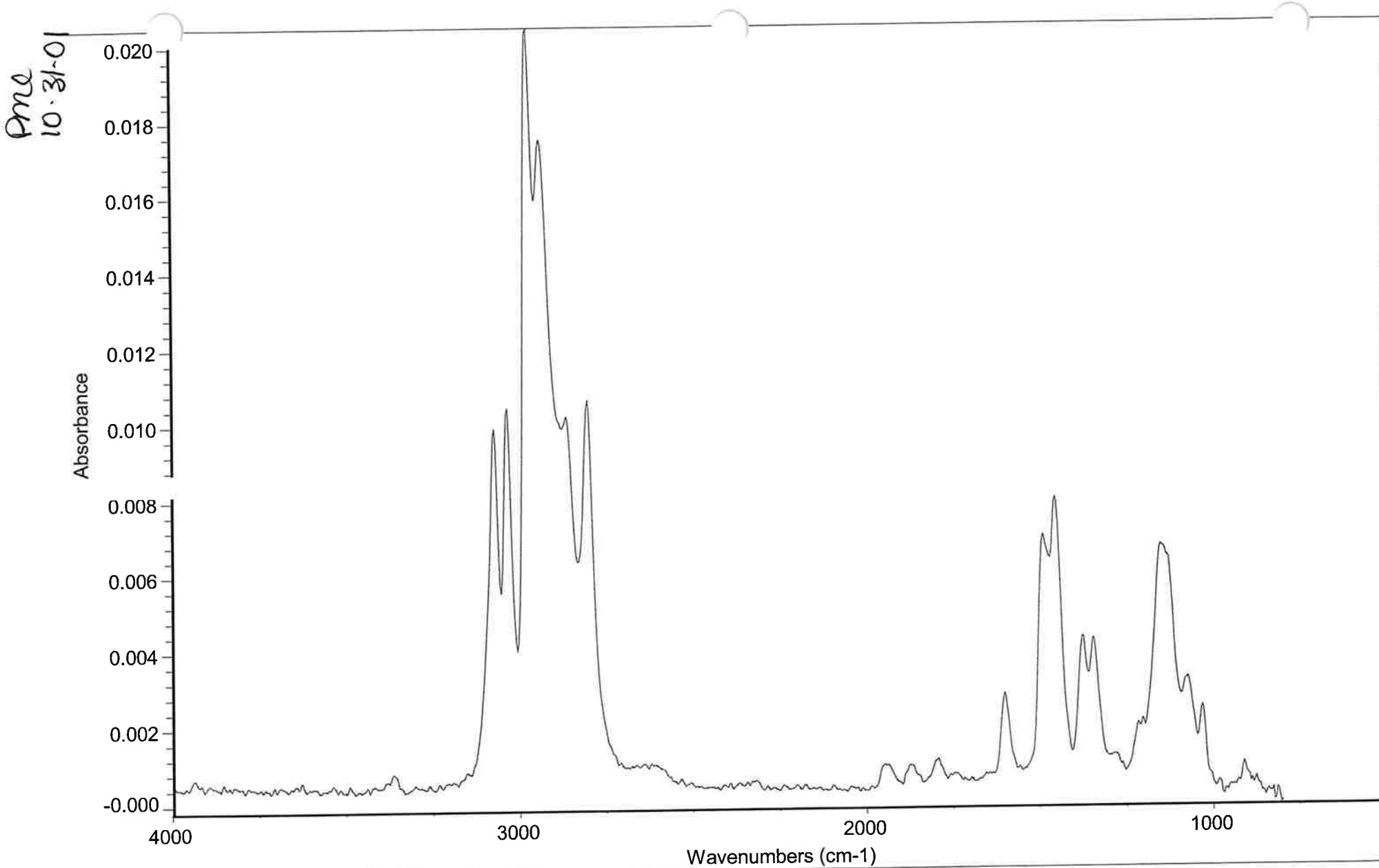


one
10-31-01



UNK # 2 BICARB/CHCL3 PHENMETRAZINE PMC
GC/FTIR

Collection time: Wed Oct 31 15:37:25 2001

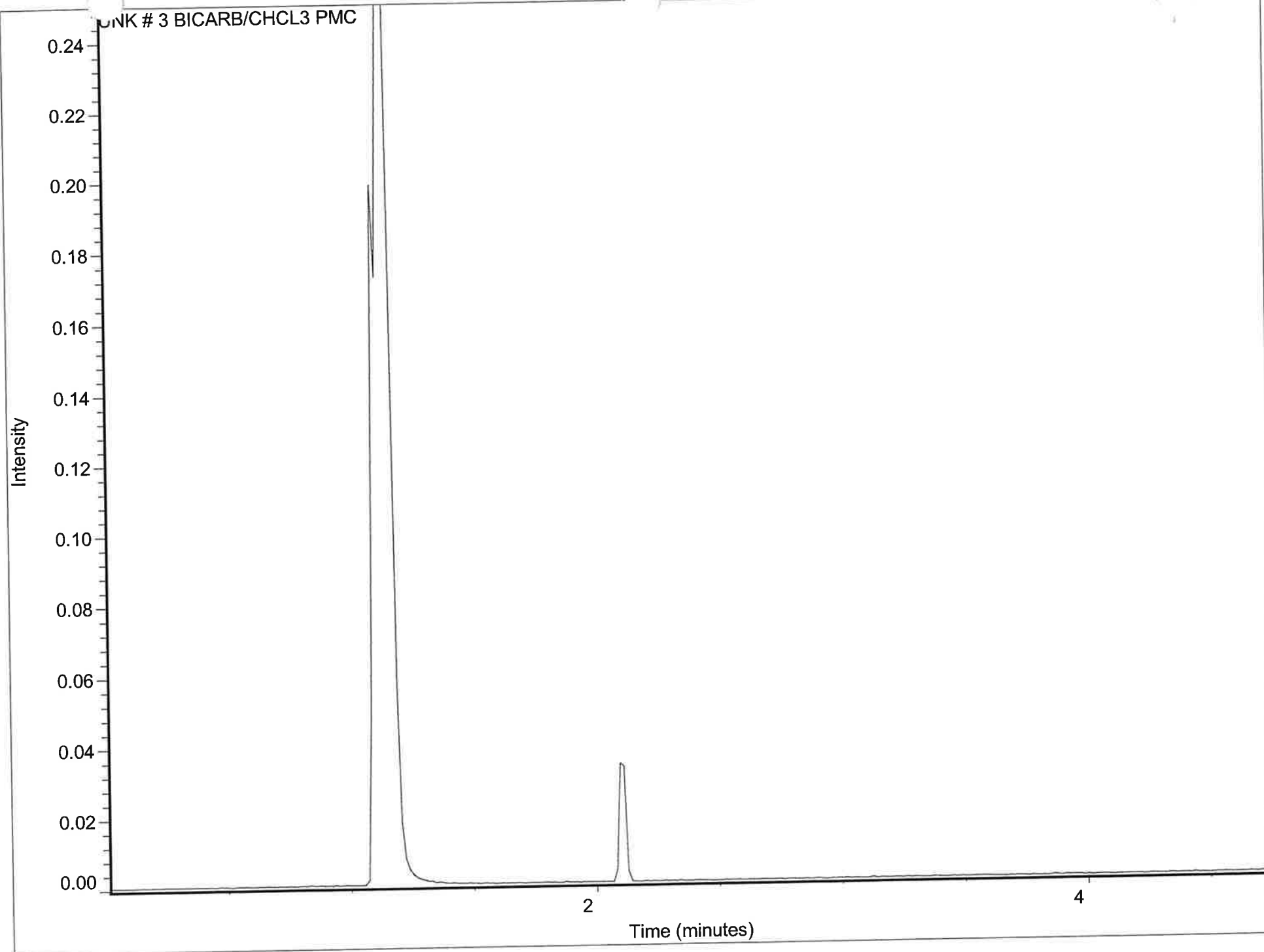


UNK # 3 BICARB/CHCL3 METHAMPHETAMINE PMC

GC/FTIR

Collection time: Wed Oct 31 15:33:27 2001

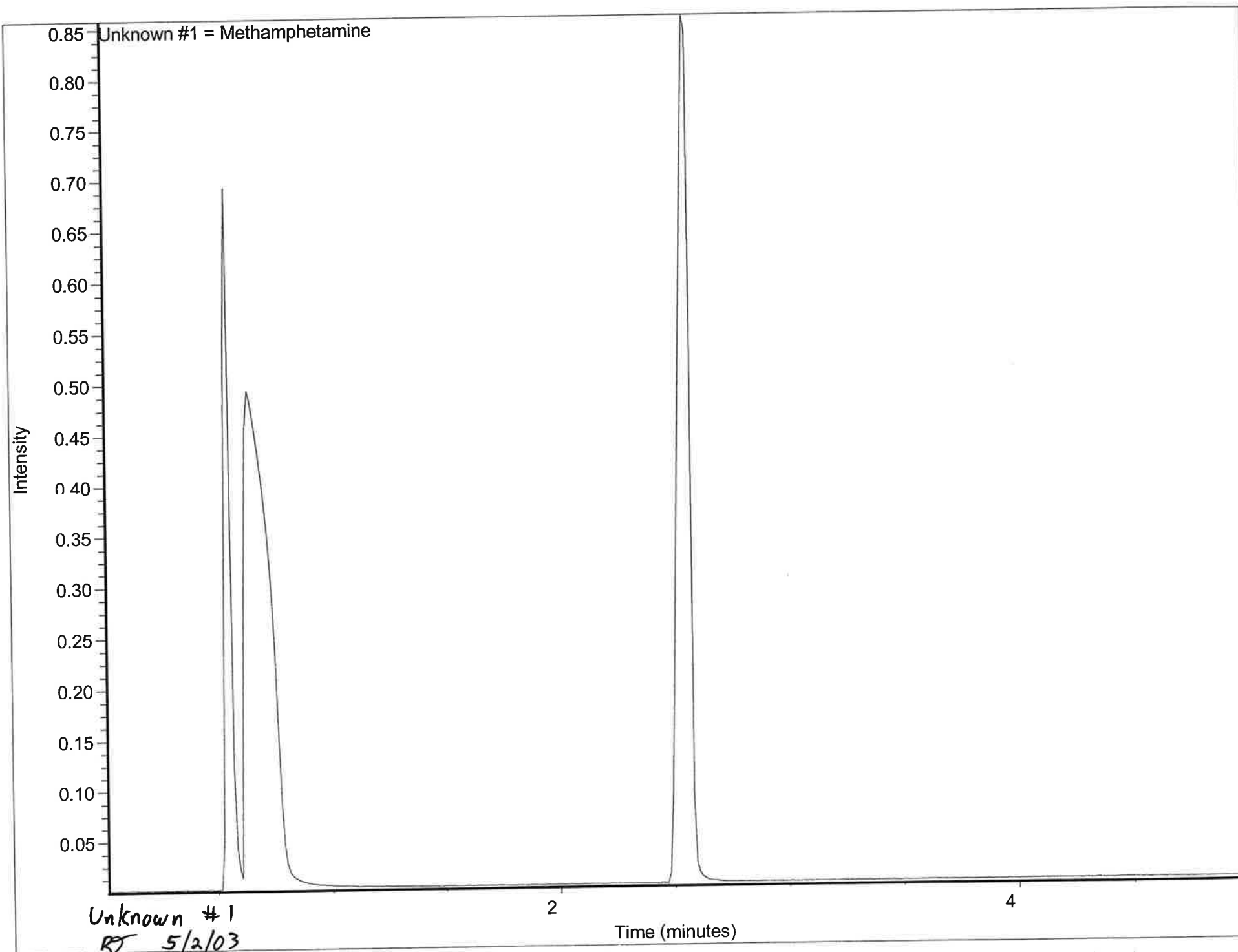
10-21-01
DME



Brett Trotter
GC IR Unknowns

- #1 - Methamphetamine
- #2 - Pseudoephedrine
- #3 - Phenfermine

5/2/03
JH



Unknown #1

RT 5/2/03

Methamphetamine

Absorbance

0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00

4000

Unknown #1
Methamphetamine

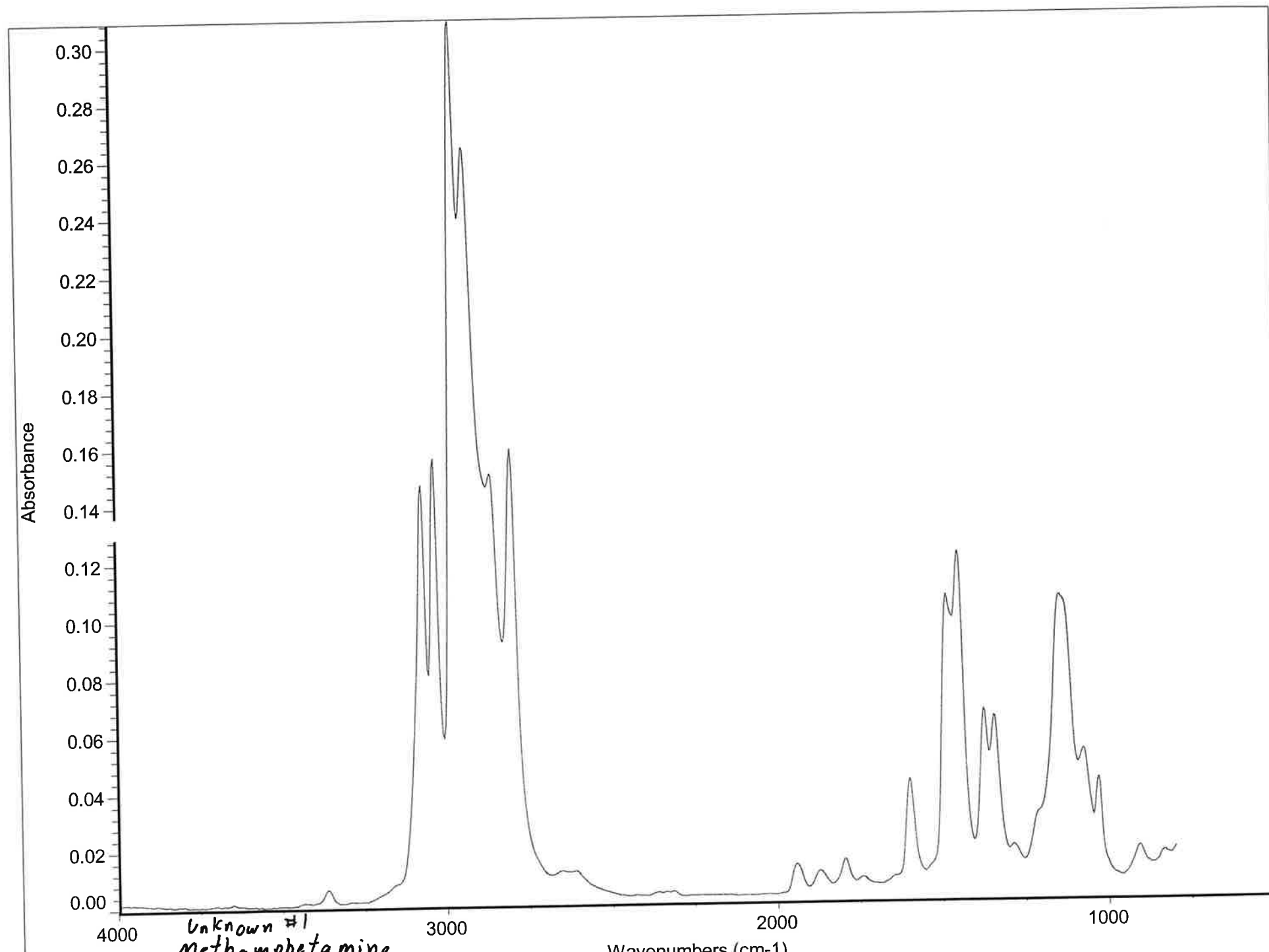
3000

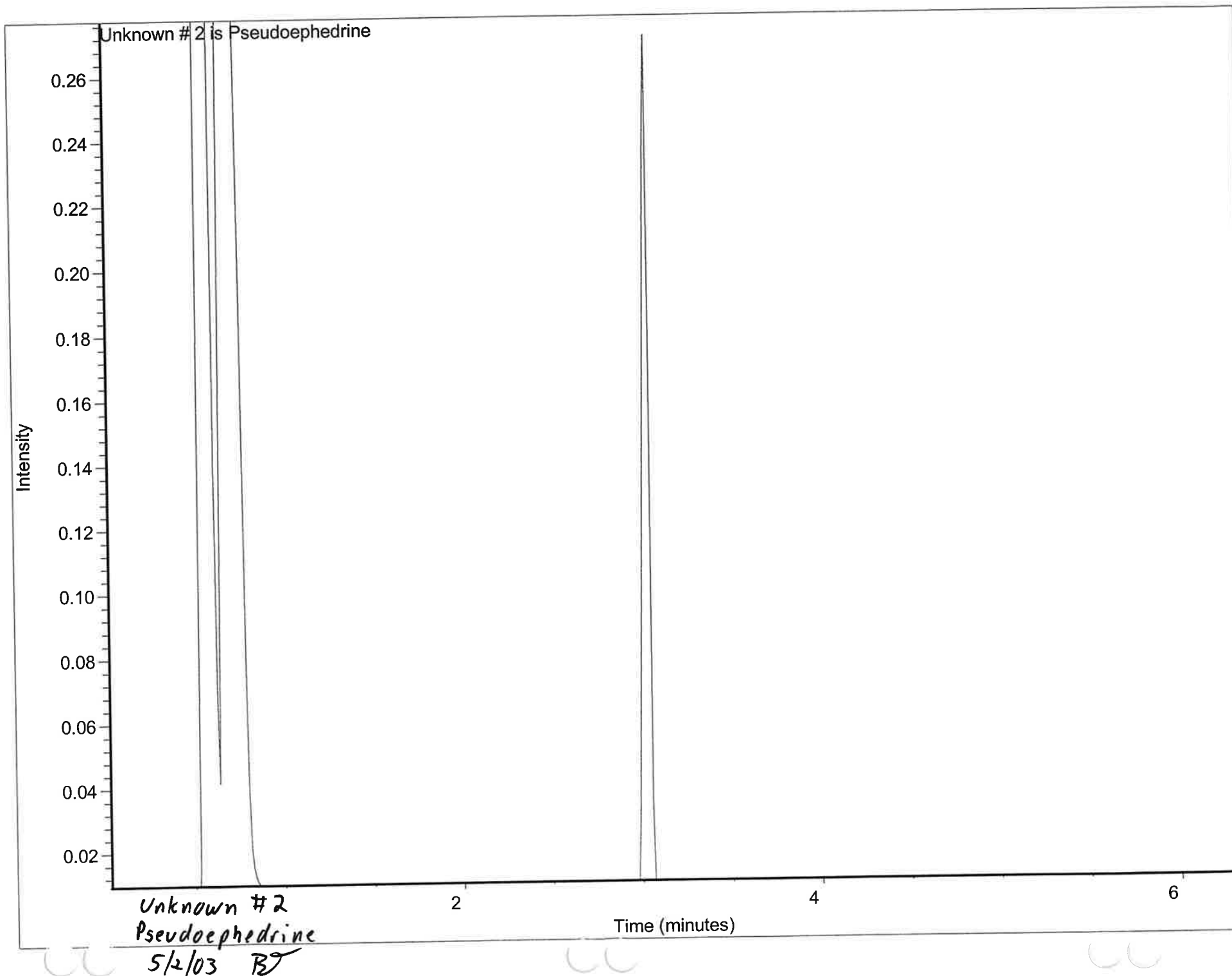
Wavenumbers (cm-1)

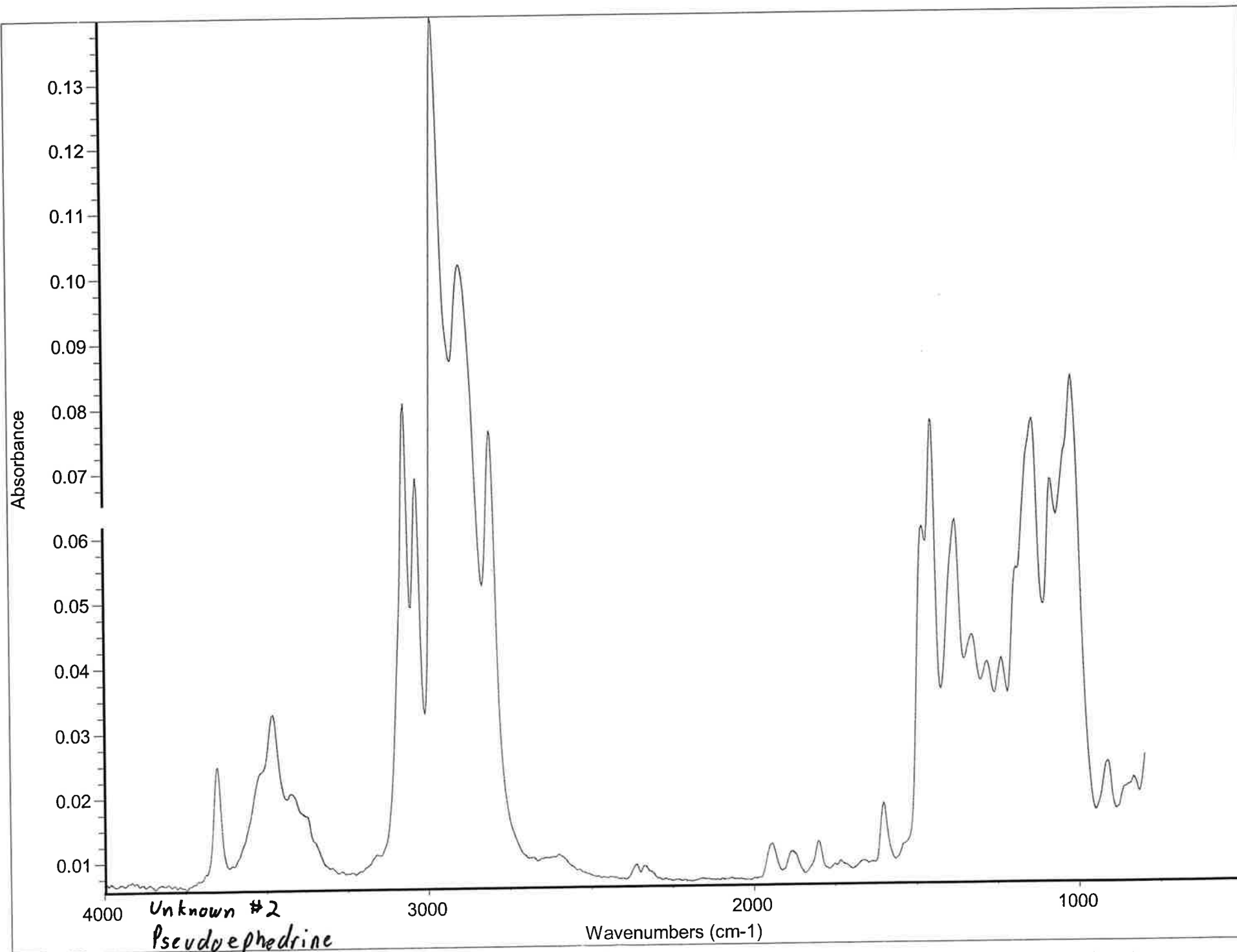
2000

1000

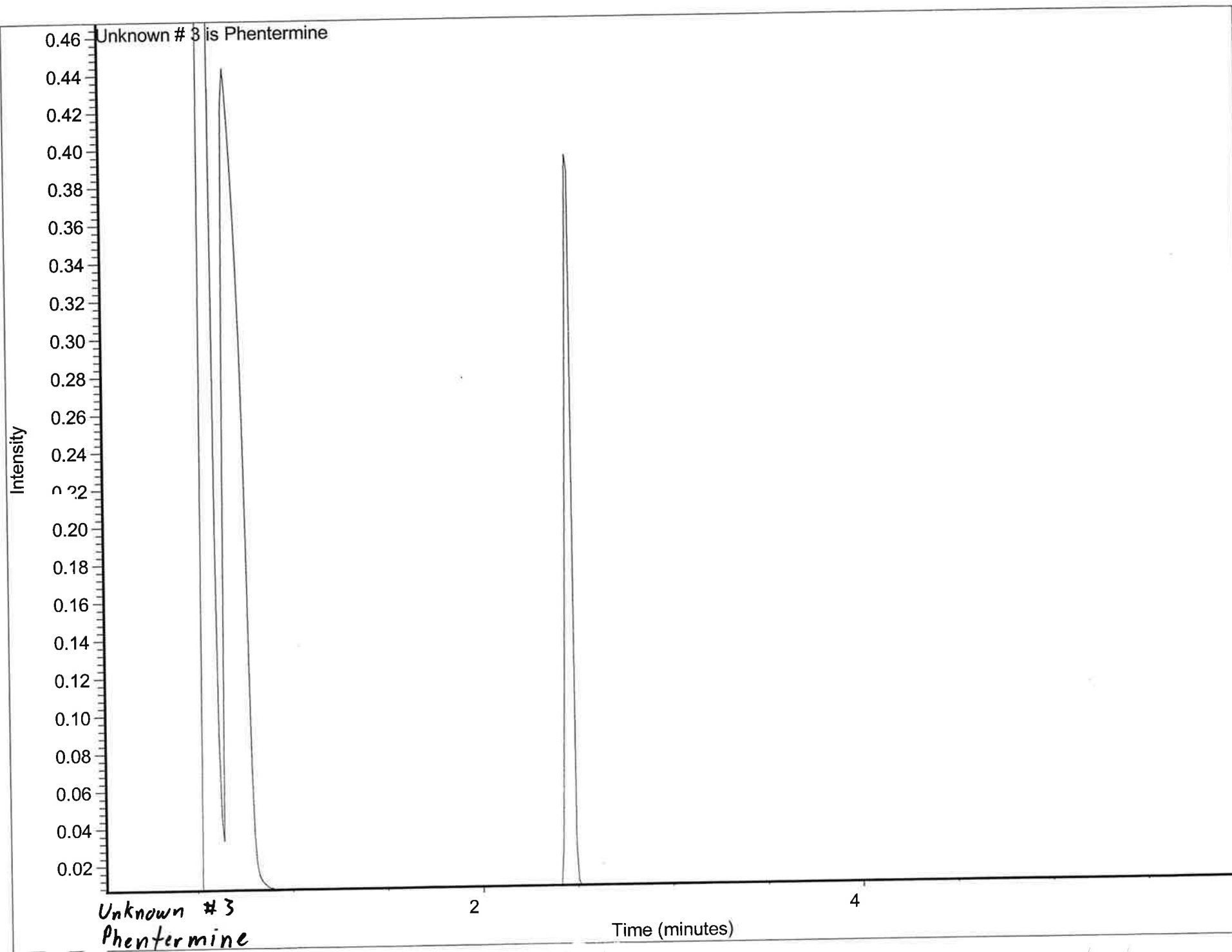
5/2/03 BJ





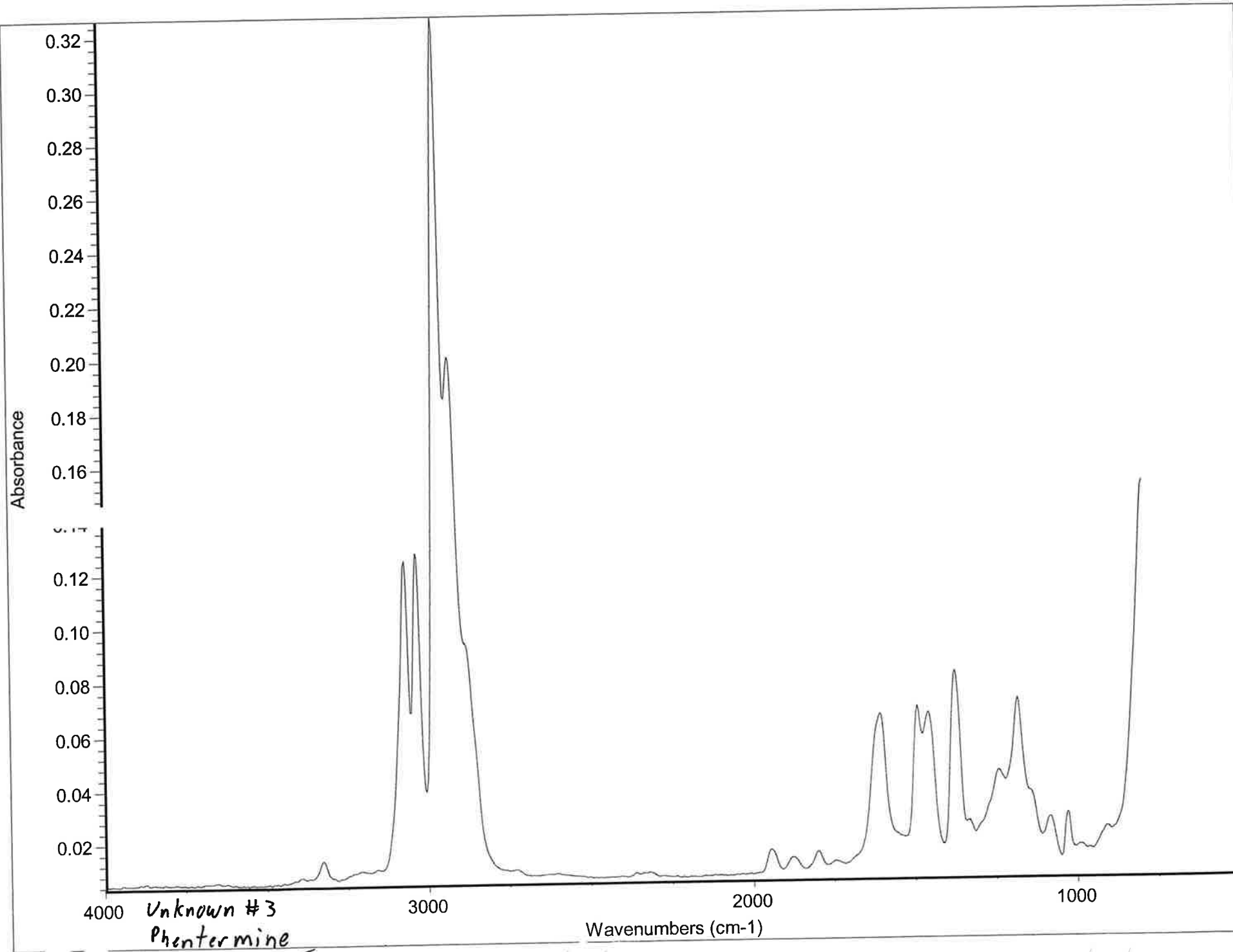


Unknown #2
Pseudoephedrine
5/2/03 BJ



Unknown # 3
Phentermine

5/2/03 TBT



Unknown #3
Phentermine

5/2/03 JD

8/4/03

GC/IR - Unknowns for Mark Dunk

1. Unknown # 1

Ephedrine (29.60mg) - From DS unk.

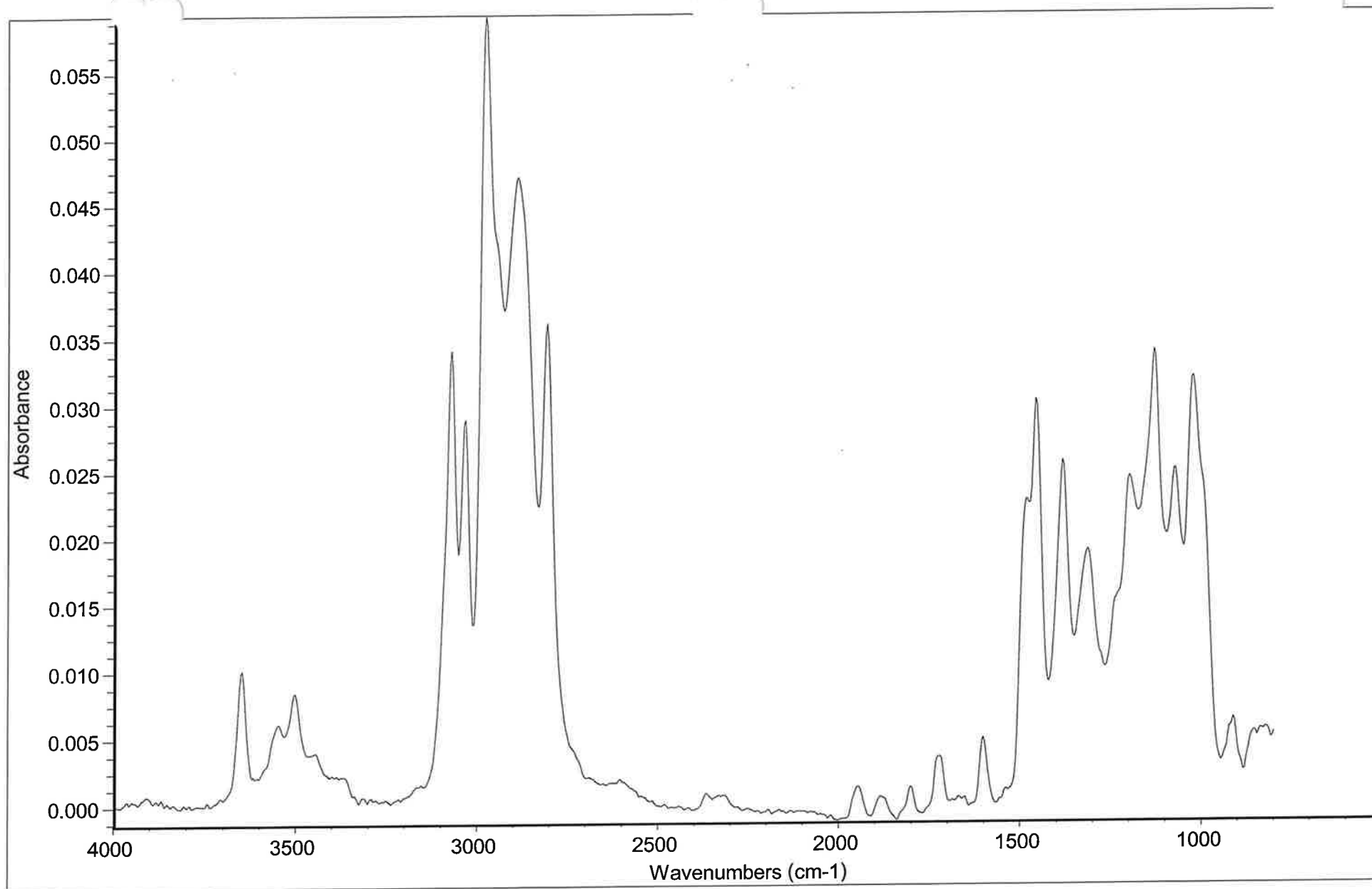
2. Unknown # 2

Methamphetamine (17.13mg) From GG & WS
unknown.

3. Unknown # 3

Pseudoephedrine 10.85mg From STD

Clark's GC/IR unknowns

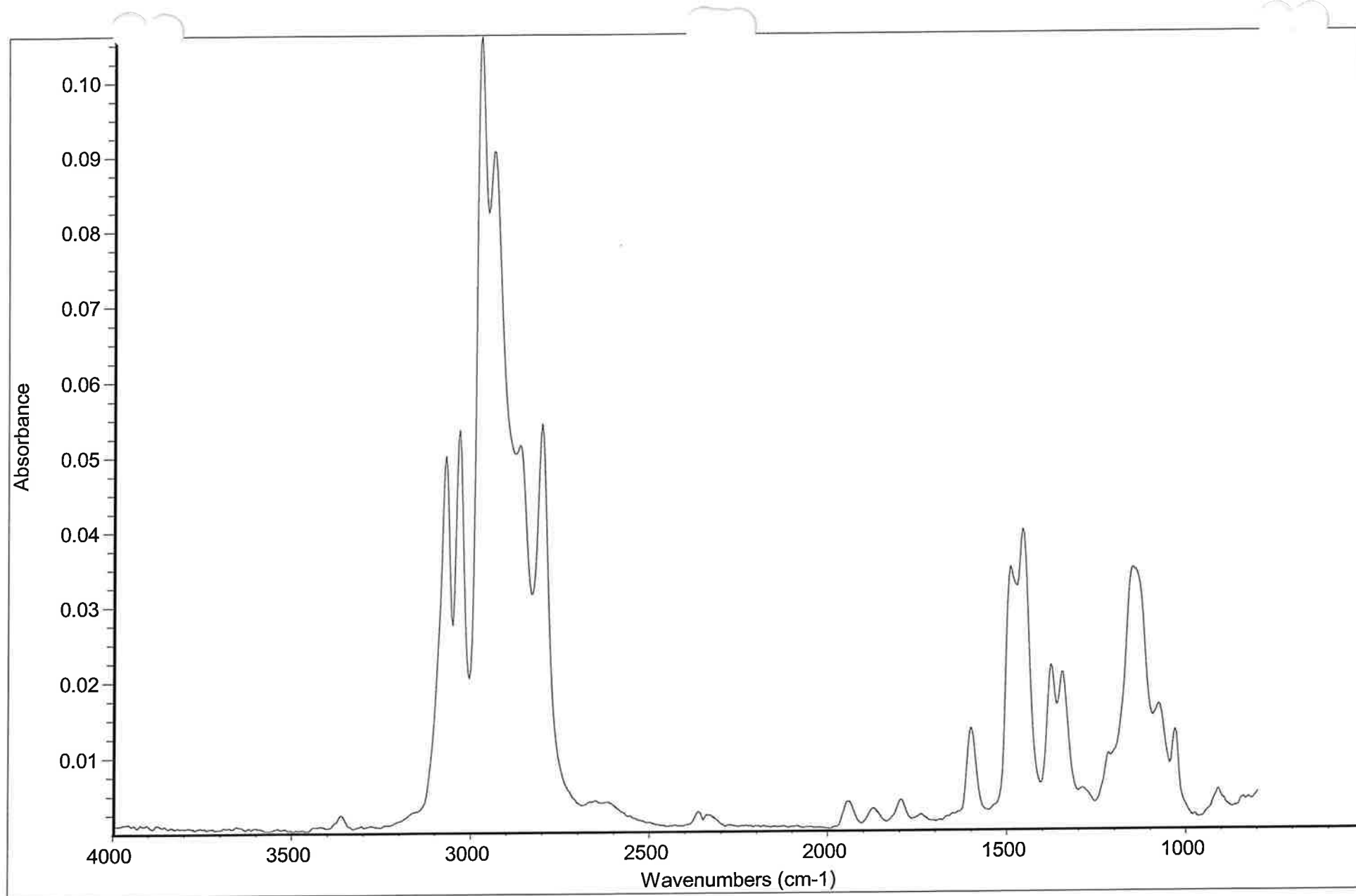


UNKNOWN #1 NAHCO3/CHCL3 - MED

GC/FTIR 2

Ephedrine - MED

Collection time: Thu Aug 07 10:37:00 2003 (GMT-05:00)

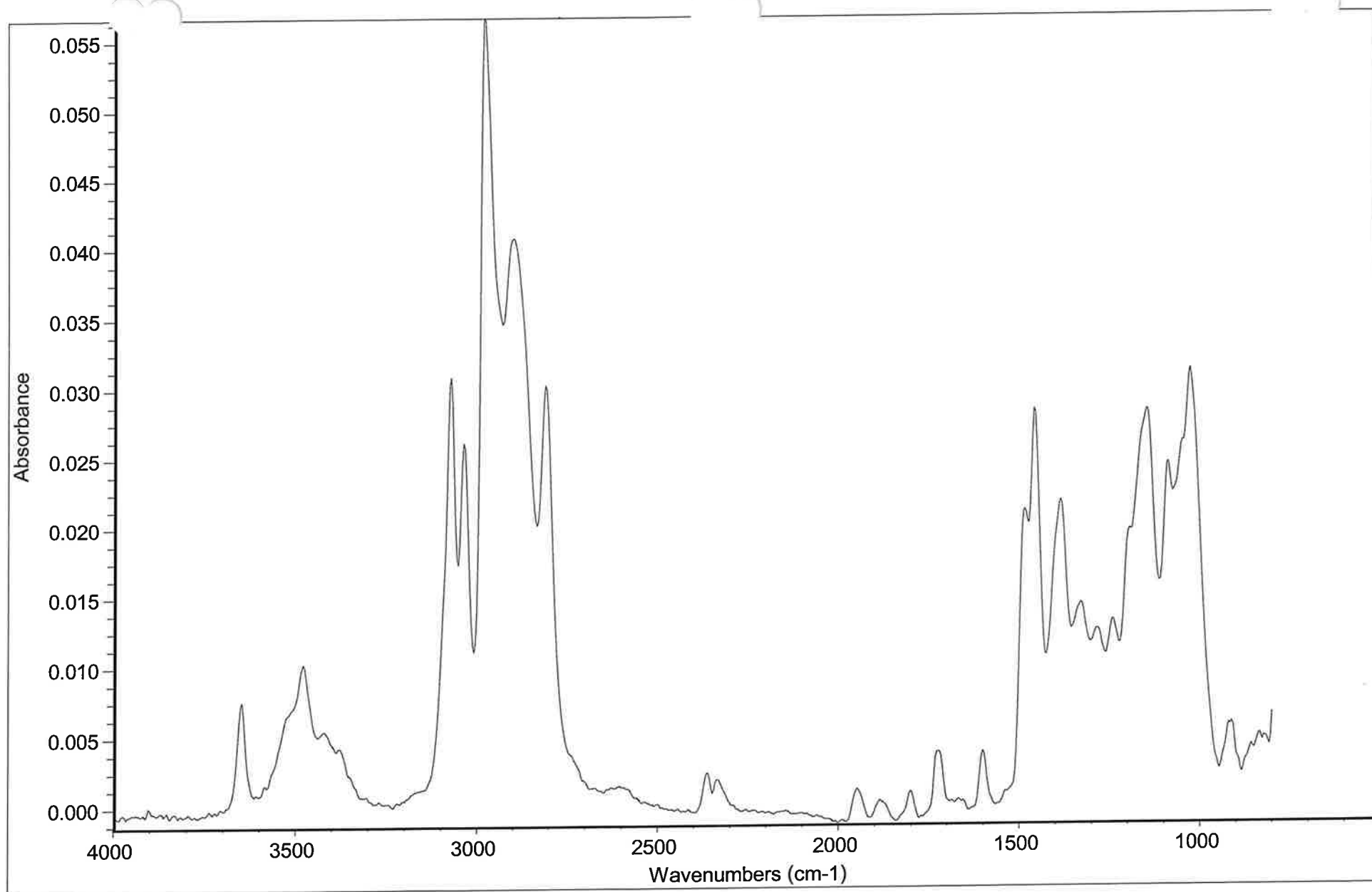


UNKNOWN #2 NAHCO3/CHCL3 - MED

GC/FTIR 2

Methamphetamine - vld

Collection time: Thu Aug 07 11:08:18 2003 (GMT-05:00)



UNKNOWN #3 NAHCO₃/CHCL₃ - MED

GC/FTIR 2

Pseudoephedrine - NAD

Collection time: Thu Aug 07 10:59:42 2003 (GMT-05:00)