Sadtler Standard Infrared Grating Spectra

Volumes 39–40

38001–40000

The publication of the physical data of the Sadtler Standard Spectra and the Sadtler Commercial Spectra is intended to be descriptive. The samples of the materials represented have come generally from other sources than our own laboratories and frequently without the donors' knowledge of their part in this publication.

On the other hand every effort is made by Sadtler Research Laboratories, Inc. to assure the reliability of the published spectra. When improved data is available or errors are called to our attention we revise and reissue the proper replacement spectra.

SADTLER RESEARCH LABORATORIES, INC. DOES NOT WARRANT MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, OR MAKE ANY OTHER WARRANTY OR AGREEMENT EXPRESS OR IMPLIED WITH RESPECT TO THE SPECTRA CONTAINED HEREIN. IF ANY MODEL OR SAMPLE WAS SHOWN TO BUYER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE ARTICLE AND NOT TO REPRESENT THAT ANY SPECTRA CONTAINED HEREIN WOULD CONFORM TO THE MODEL OR SAMPLE.

SADTLER STANDARD GRATING SPECTRA

UPDATE VOLUME -- REISSUED PRISM SPECTRA

This volume contains 1000 absorption spectra recorded on a prism spectrophotometer determined in the 2.0 - 15.0 micron region and presented in a linear wavelength vs. percent transmittance format. These spectra were previously published in the Sadtler Standard Prism Spectra collection and are now re-issued and renumbered in the sequence of the Sadtler Standard Grating Spectra to integrate all available infrared data for the user of this publication. While grating spectra are generally preferred by spectroscopists, it is obviously better to have a prism spectrum if it is the only data available.

The spectra were prepared at Sadtler Research Laboratories unless otherwise noted on the spectrum heading, the name of the donor of each compound is also shown on the heading. Although some of the spectra were published over ten years ago and do not always appear to be of optimum quality, they are included in the publication to insure complete coverage of published compounds.

Standard techniques have been developed in our laboratories to insure that the spectra published are of the best possible quality and reproducible for comparison and identification purposes. The preferred sample preparation methods are the capillary cell for liquids and the KBr wafer for solids, the spectra obtained are qualitative only. The KBr method is used for solids since it is a standard technique and requires a small sample amount for preparation of good spectra, leaving the remainder for further analytical investigation. A paper describing the preparation procedure entitled Improved KBr Techniques by Traude and Philip Sadtler is available from our laboratories.

When the KBr method cannot be used for solids due to reaction with the sample, the Split Mull technique is used; the sample is mulled in mineral oil and the entire spectrum is scanned, then a perfluorinated hydrocarbon mull is prepared and scanned in the 3.0 - 3.8 and 6.6 - 7.4 micron regions. This provides a complete spectrum of the compound.

Liquid samples and low melting solids are generally determined using capillary cells.

Each spectrum is clearly labelled with the sample preparation technique used.

The following five indexes accompany the Sadtler Standard Spectra:

- Alphabetical Index
- Molecular Formula Index
- Chemical Classes Index
- Numerical Index
- Spec-Finder

In each of the first four indexes the grating spectrum numbers of compounds are cross-referenced to their corresponding numbers in the Sadtler Standard collections of Ultraviolet and Nuclear Magnetic Resonance Spectra. A reissued prism spectrum is always signified by a P suffix to the number in the grating column of each index.

The final index, the Spec-Finder, provides a means of identifying spectra of unknown compounds by comparison with the coded peaks of the references.

WE SUGGEST THAT THE INTRODUCTIONS TO THE VARIOUS INDEXES BE READ CAREFULLY TO ASSURE THEIR BEST UTILIZATION.

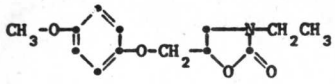
38001P

3-ETHYL-5-[(p-METHOXYPHENOXY)METHYL]-2-OXAZOLIDINONE

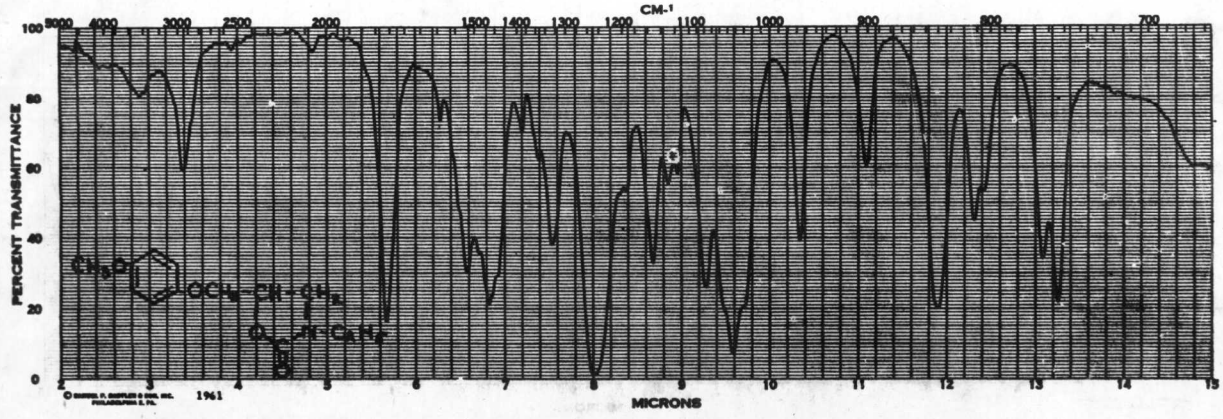
$C_{13}H_{17}NO_4$ Mol. Wt. 251.28

M.P. 80-81°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia



KBr Wafer



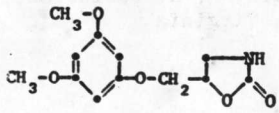
38002P

5-[(3,5-DIMETHOXYPHENOXY)METHYL]-2-OXAZOLIDINONE

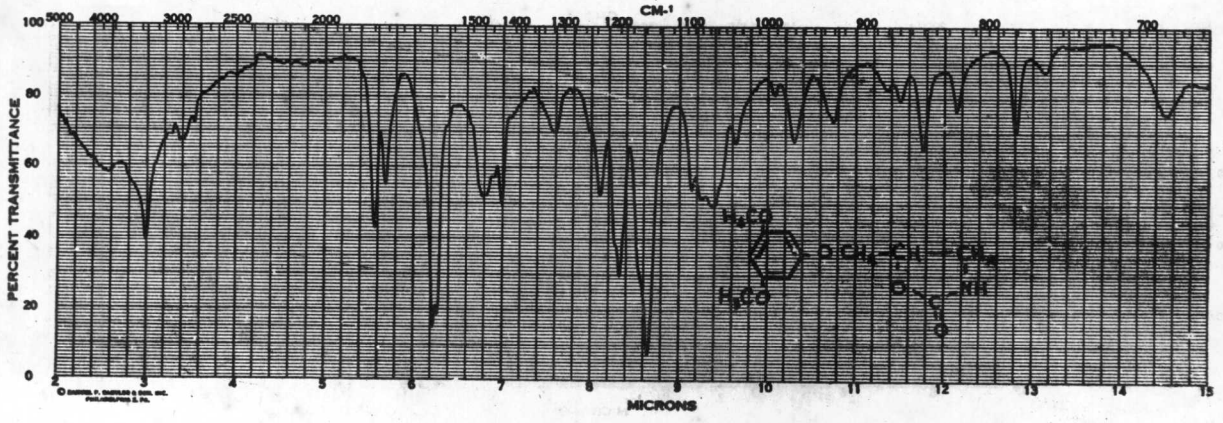
$C_{12}H_{15}NO_5$ Mol. Wt. 253.26

M.P. 124-125°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia



KBr Wafer



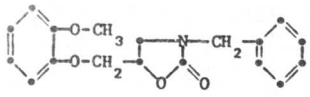
38003P

3-BENZYL-5-[(o-METHOXYPHENOXY)METHYL]-2-OXAZOLIDINONE

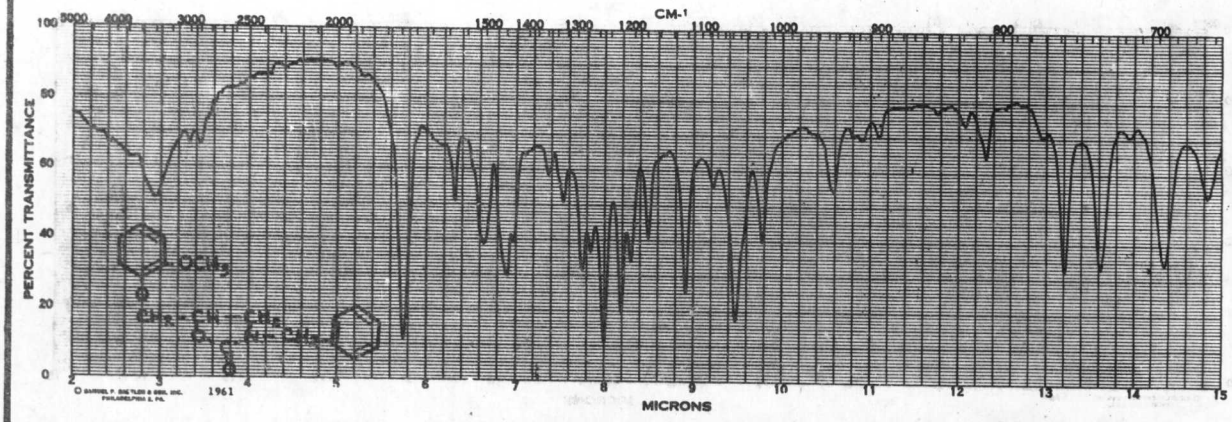
$C_{18}H_{19}NO_4$ Mol. Wt. 313.36

M.P. 59-59.5°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia



KBr Wafer



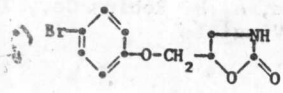
38004P

5-[(p-BROMOPHENOXY)METHYL]-2-OXAZOLIDINONE

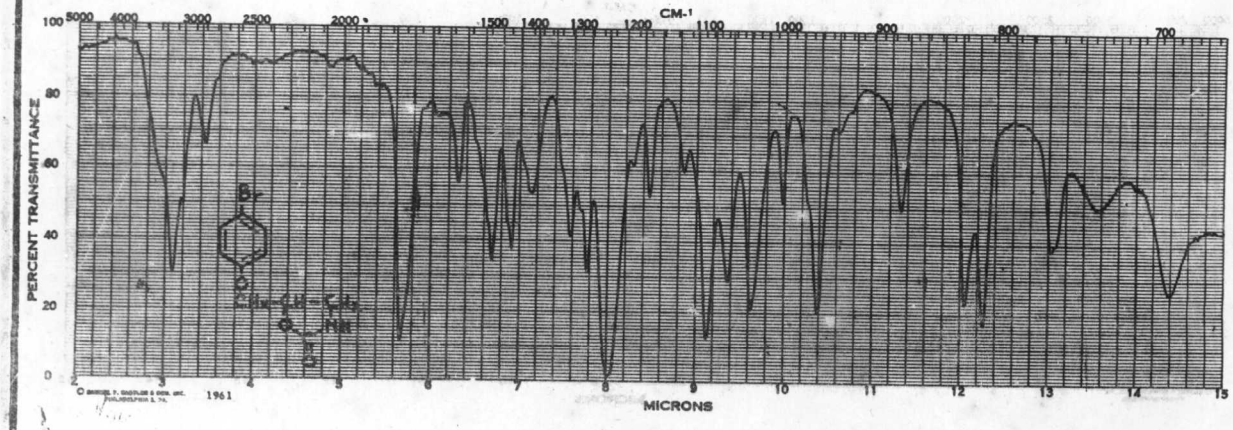
$C_{10}H_{10}BrNO_3$ Mol. Wt. 272.11

M.P. 153-154°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia

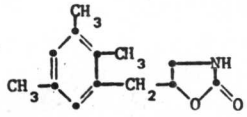


KBr Wafer



38005P

5-[(2,3,5-TRIMETHYLPHENOXY)METHYL]-2-OXAZOLIDINONE

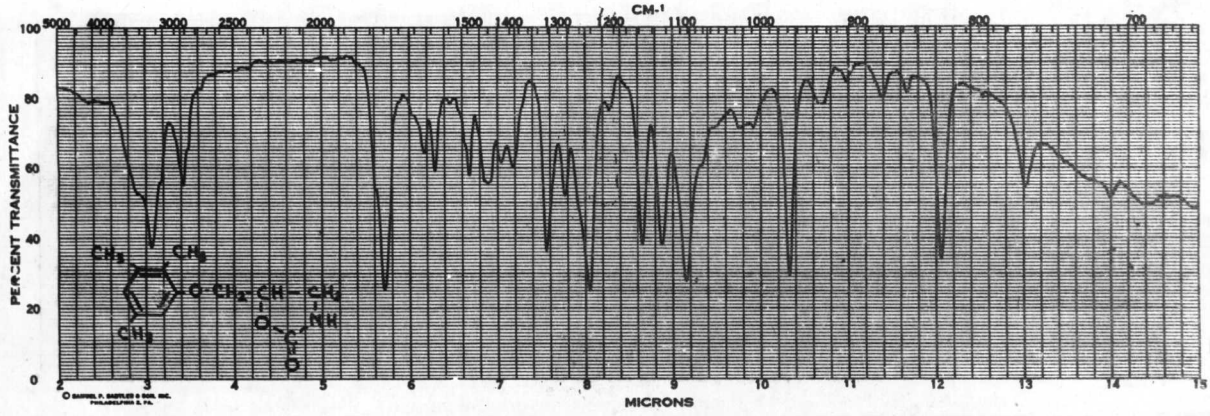


$C_{13}H_{17}NO_3$ Mol. Wt. 235.29

M.P. 125-126°C

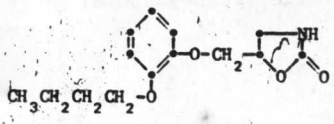
Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia

KBr Wafer



38006P

5-[(o-BUTOXYPHENOXY)METHYL]-2-OXAZOLIDINONE

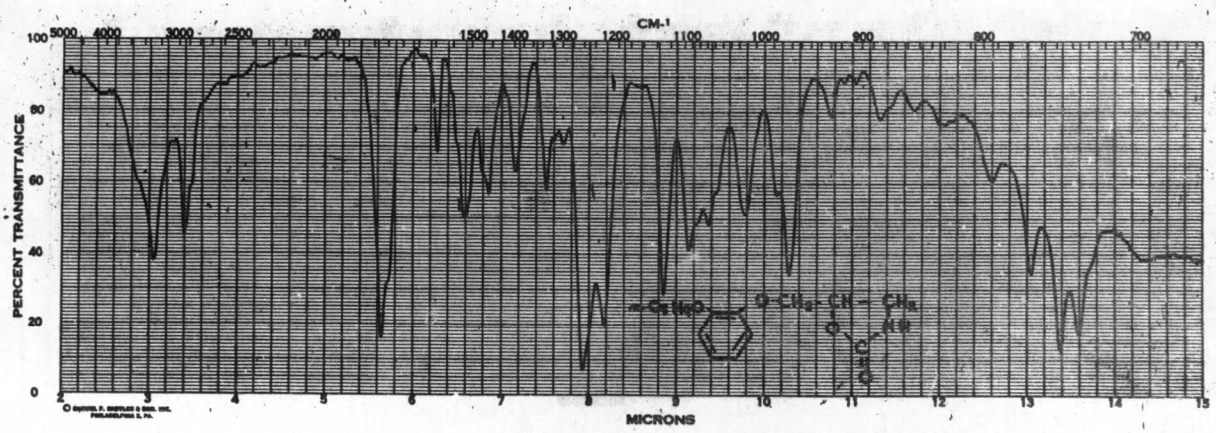


$C_{14}H_{19}NO_4$ Mol. Wt. 265.31

M.P. 62-63°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc.
Richmond, Virginia

KBr Wafer



38007P

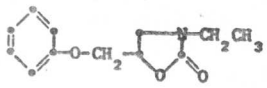
3-ETHYL-5-(PHENOXYMETHYL)-2-OXAZOLIDINONE

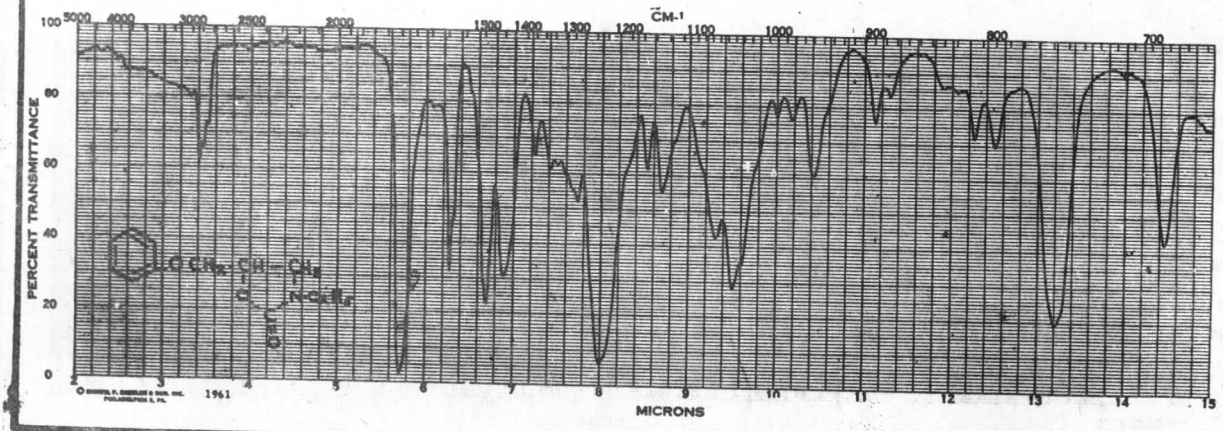
$C_{12}H_{15}NO_3$ Mol. Wt. 221.26

M.P. 43-44°C

Source of Sample: C. Lunsford, A. H. Robins Co., Inc. Richmond, Virginia

KBr Wafer





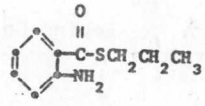
38008P

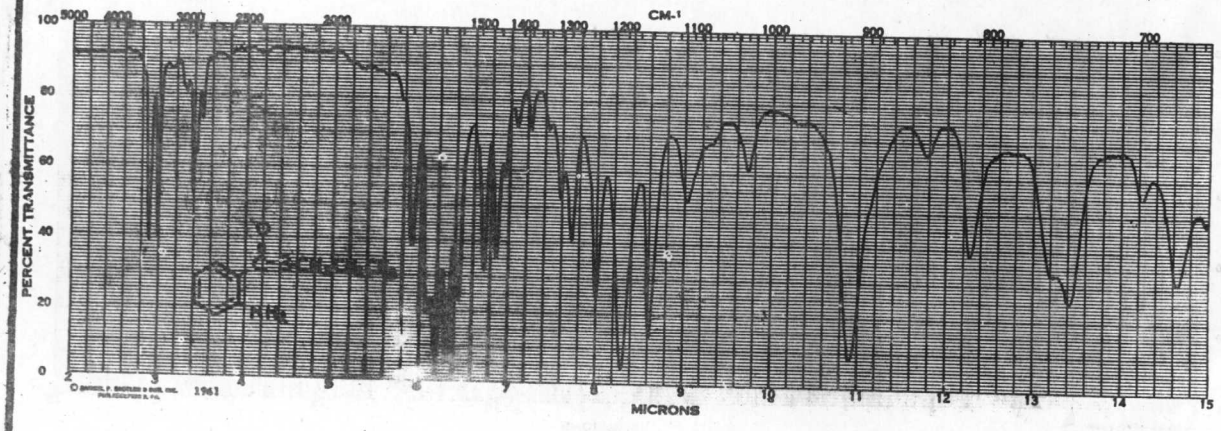
THIOANTHRANILIC ACID, S-PROPYL ESTER

$C_{10}H_{13}NOS$ Mol. Wt. 195.29

Source of Sample: R. Staiger, Ursinus College Collegeville, Pennsylvania

Capillary Cell: Neat

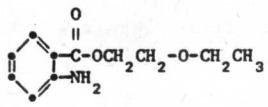




38009P

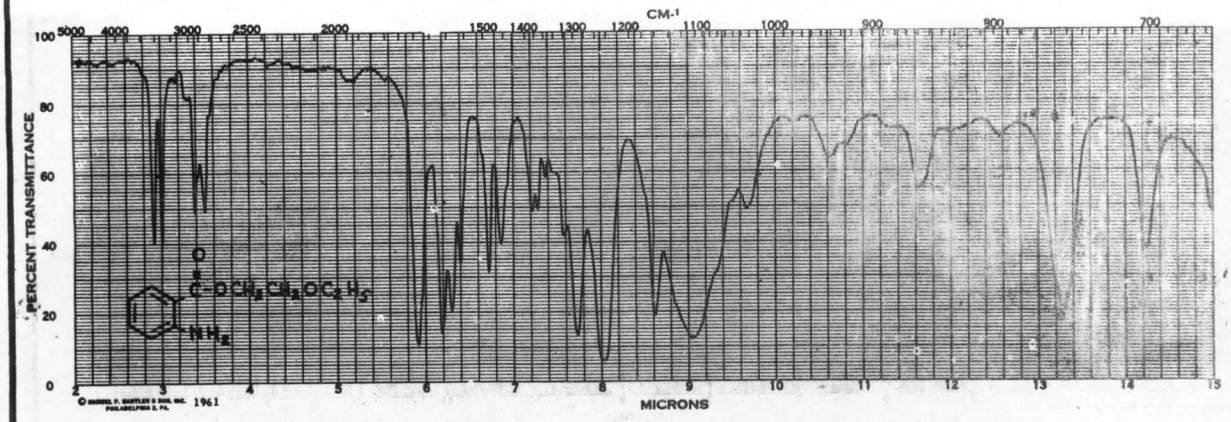
ANTHRANILIC ACID, 2-ETHOXYETHYL ESTER

$C_{11}H_{15}NO_3$ Mol. Wt. 209.25



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

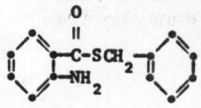
Capillary Cell: Neat



38010P

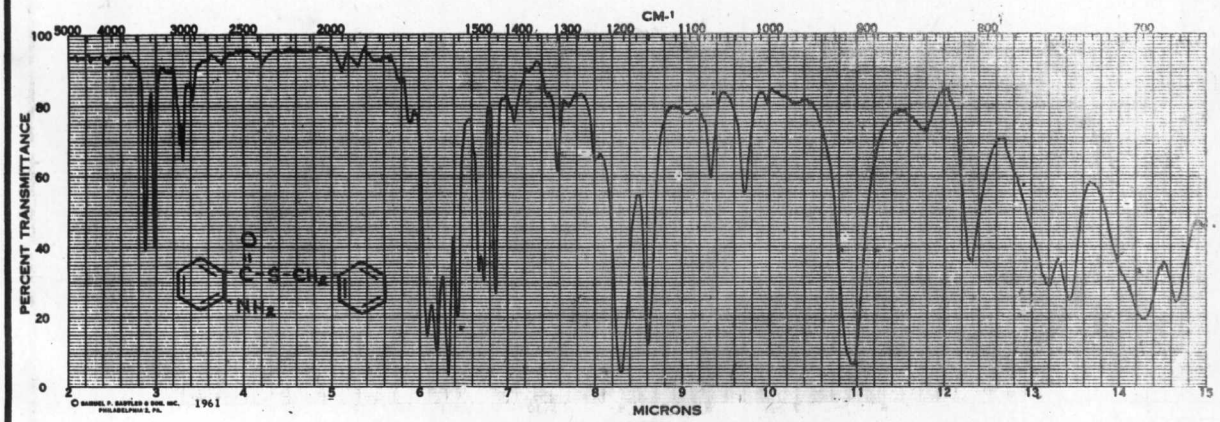
THIOANTHRANILIC ACID, S-BENZYL ESTER

$C_{14}H_{13}NOS$ Mol. Wt. 243.33



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

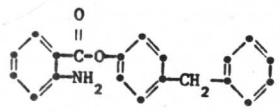
Capillary Cell: Neat



38011P

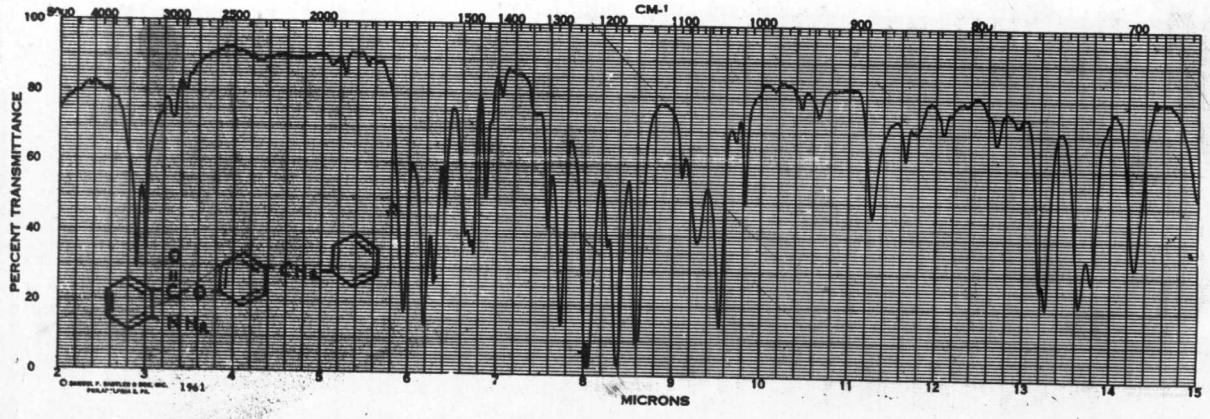
ANTHRANILIC ACID, p-BENZYLPHENYL ESTER

$C_{20}H_{17}NO_2$ Mol. Wt. 303.36



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

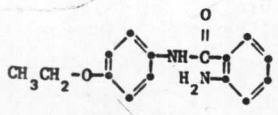
KBr Wafer



38012P

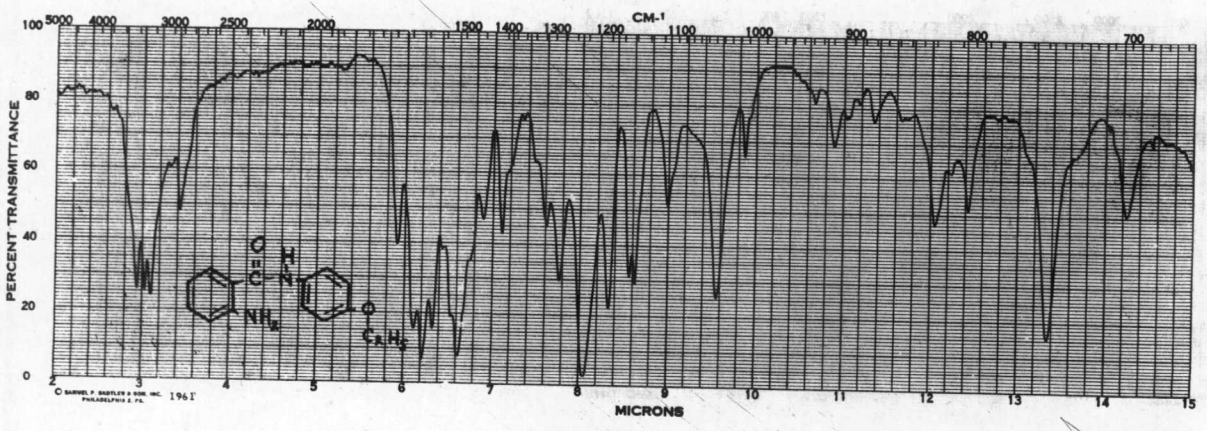
2-AMINO-p-BENZOPHENETIDIDE

$C_{15}H_{16}N_2O_2$ Mol. Wt. 256.31



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

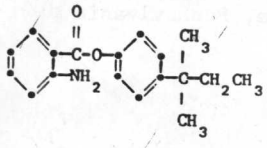
KBr Wafer



ANTHRANILIC ACID, p-tert-PENTYLPHENYL ESTER

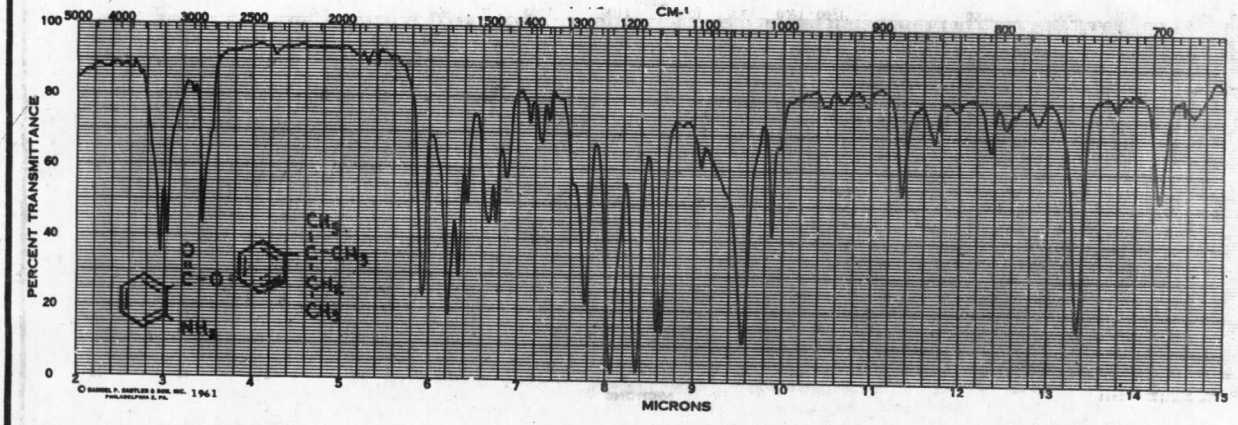
38013P

$C_{18}H_{21}NO_2$ Mol. Wt. 283.37



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

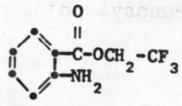
KBr Wafer



ANTHRANILIC ACID, 2,2,2-TRIFLUOROETHYL ESTER

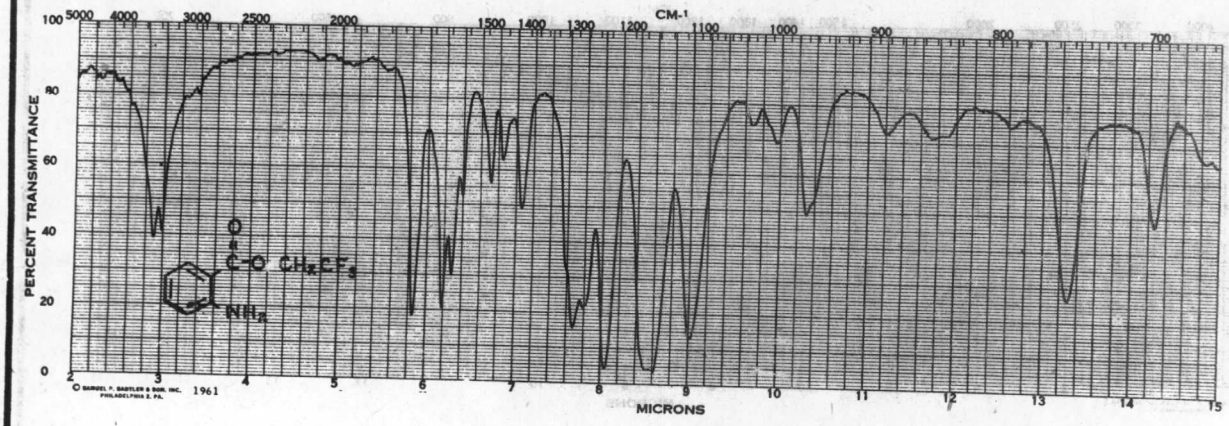
38014P

$C_9H_8F_3NO_2$ Mol. Wt. 219.16



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

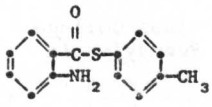
KBr Wafer



38015P

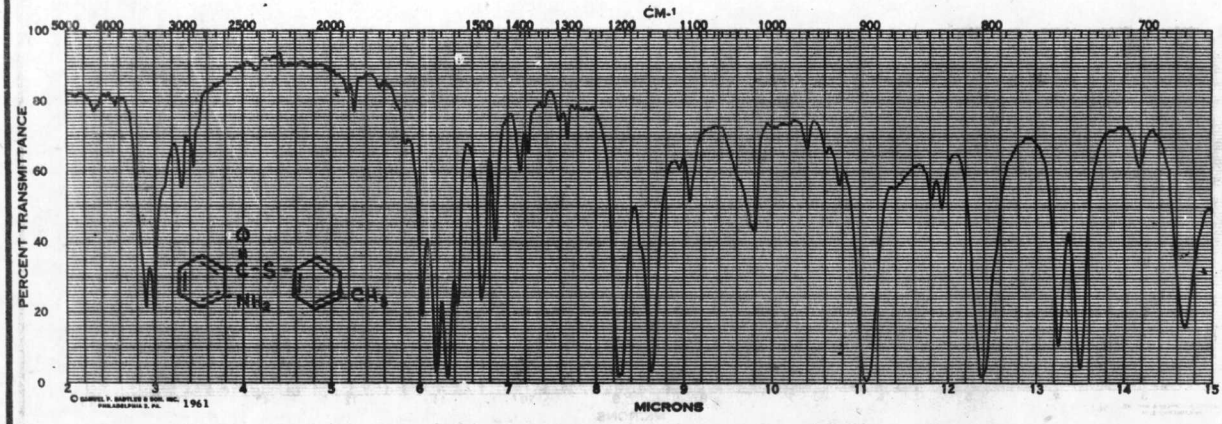
THIOANTHRANILIC ACID, S-p-TOLYL ESTER

$C_{14}H_{13}NOS$ Mol. Wt. 243.33



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

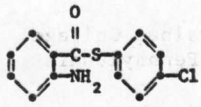
KBr Wafer



38016P

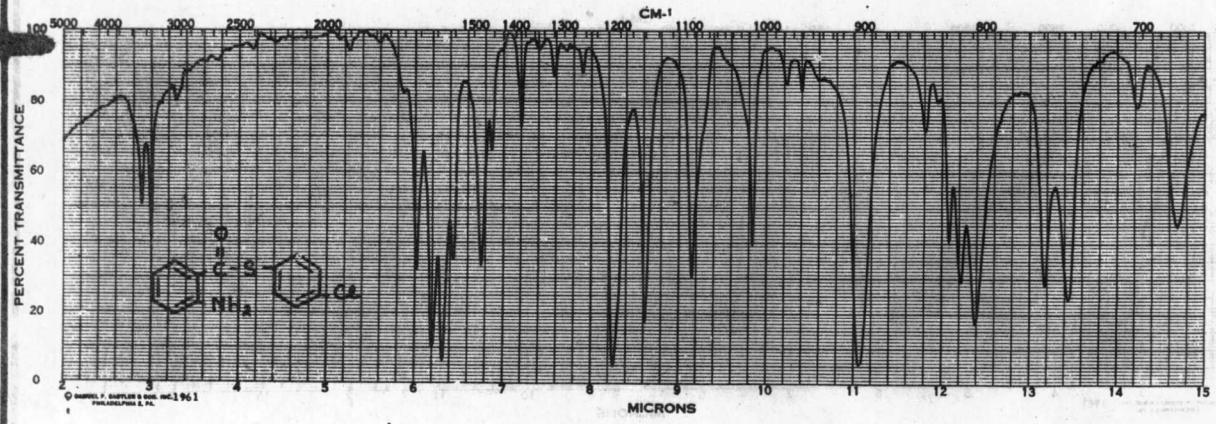
THIOANTHRANILIC ACID, S-(p-CHLOROPHENYL) ESTER

$C_{13}H_{10}ClNOS$ Mol. Wt. 263.75



Source of Sample: R. Staiger, Ursinus College
Collegeville, Pennsylvania

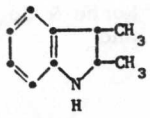
KBr Wafer



38017P

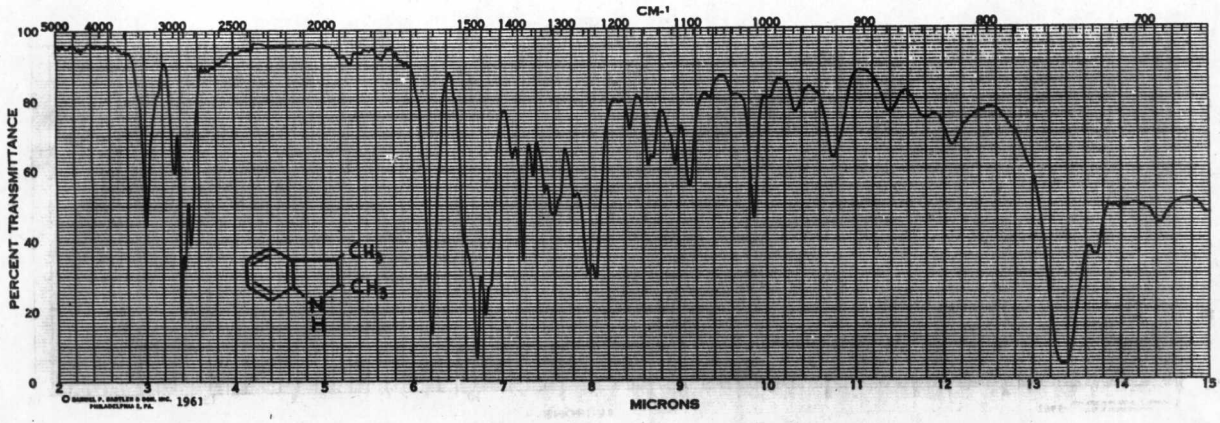
cis-2,3-DIMETHYLINDOLINE

$C_{10}H_{13}N$ Mol. Wt. 147.22



Source of Sample: Aldrich Chemical Company, Inc.
Milwaukee, Wisconsin

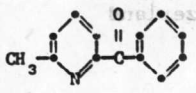
Capillary Cell: Neat



38018P

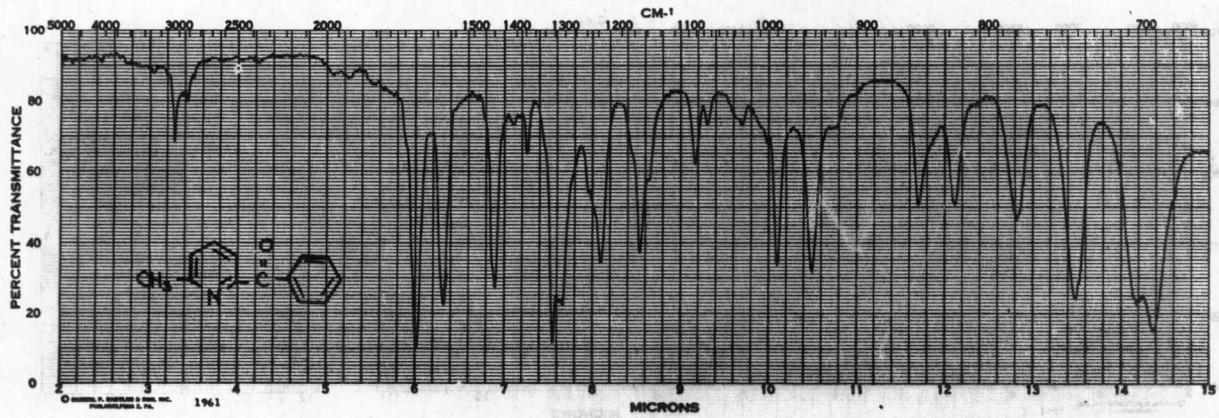
6-METHYL-2-PYRIDYL PHENYL KETONE

$C_{13}H_{11}NO$ Mol. Wt. 197.24



Source of Sample: Aldrich Chemical Company, Inc.
Milwaukee, Wisconsin

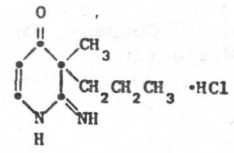
Capillary Cell: Neat



38019P

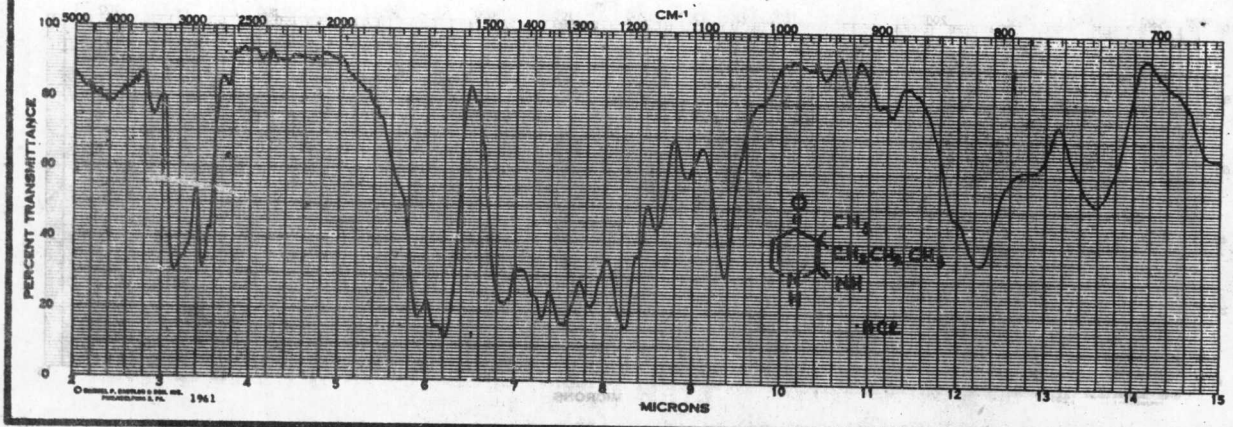
2,3-DIHYDRO-2-IMINO-3-METHYL-3-PROPYL-4(1H)-PYRIDONE, MONOHYDROCHLORIDE

$C_9H_{14}N_2O \cdot HCl$ Mol. Wt. 202.69



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

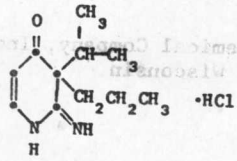
Capillary Cell: Neat



38020P

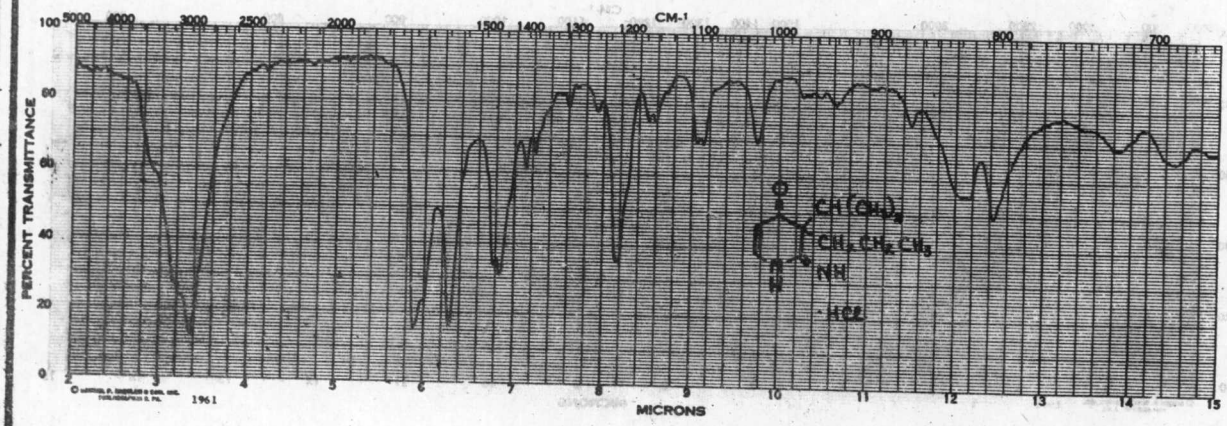
2,3-DIHYDRO-2-IMINO-3-ISOPROPYL-3-PROPYL-4(1H)-PYRIDONE, MONOHYDROCHLORIDE

$C_{11}H_{18}N_2O \cdot HCl$ Mol. Wt. 230.74



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

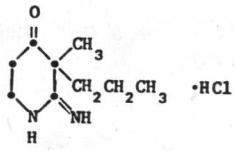
KBr Wafer



38021P

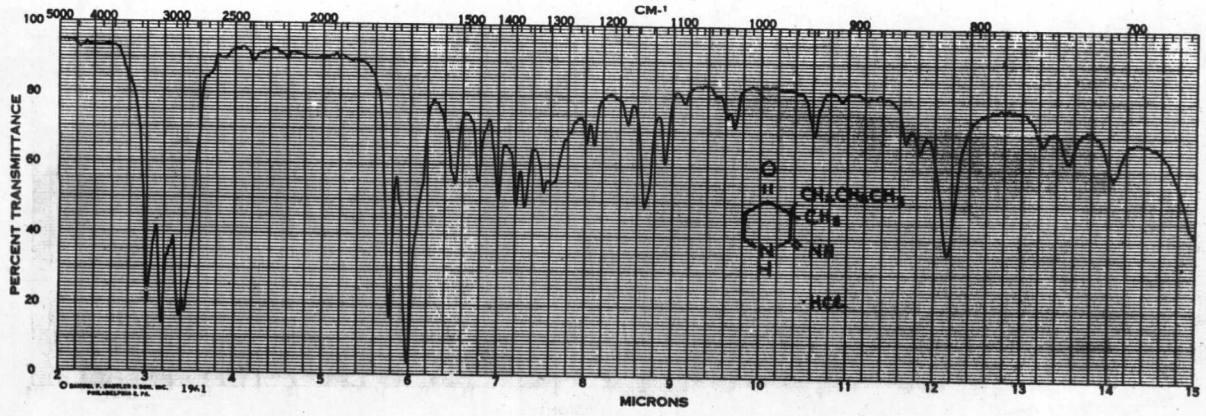
2-IMINO-3-METHYL-3-PROPYL-4-PIPERIDONE, MONOHYDROCHLORIDE

$C_9H_{16}N_2O \cdot HCl$ Mol. Wt. 204.70



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

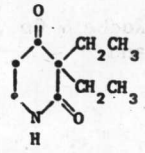
KBr Wafer



38022P

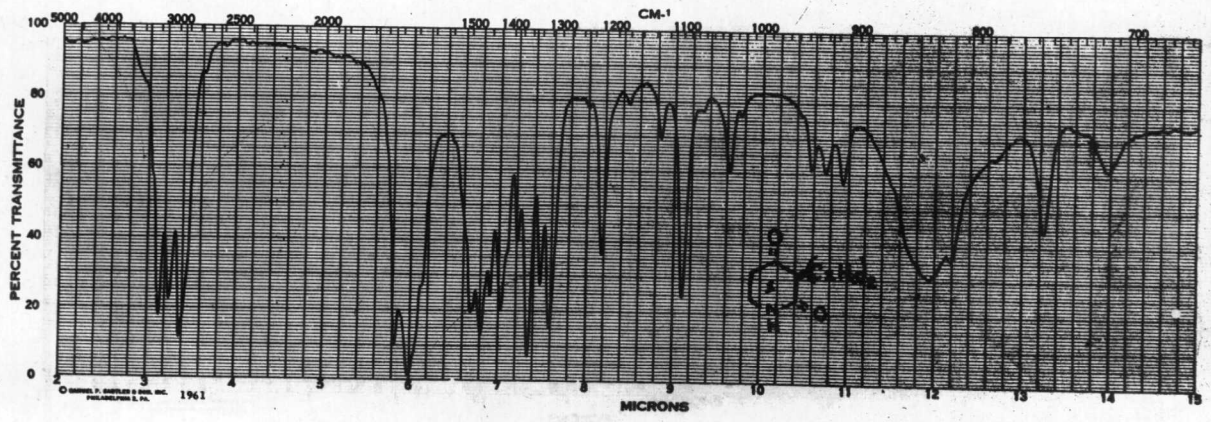
3,3-DIETHYL-2,4-PIPERIDINEDIONE

$C_9H_{15}NO_2$ Mol. Wt. 169.23



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

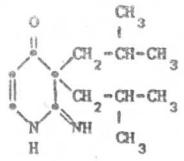
KBr Wafer



38023P

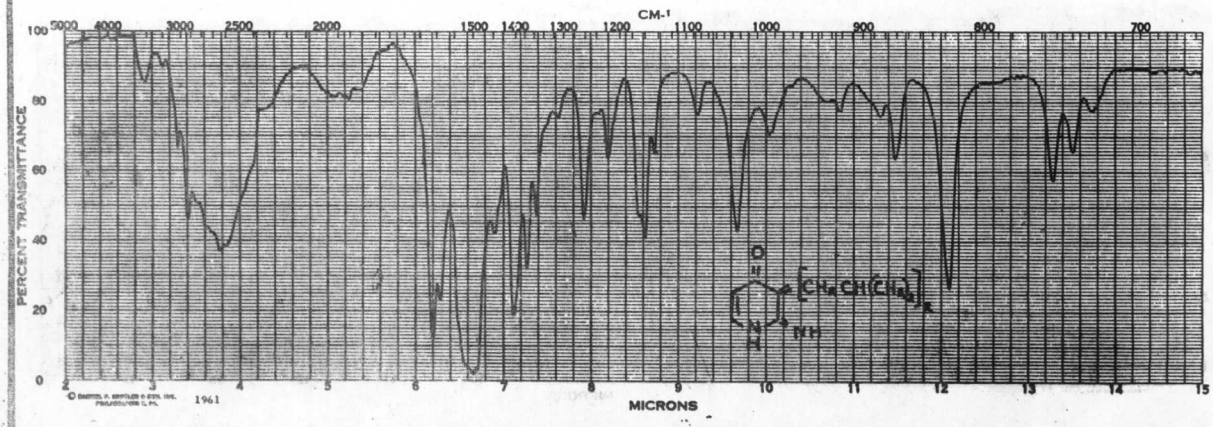
2,3-DIHYDRO-3,3-DIISOBUTYL-2-IMINO-4(1H)-PYRIDONE

$C_{13}H_{22}N_2O$ Mol. Wt. 222.33



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

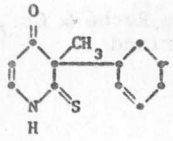
KBr Wafer



38024P

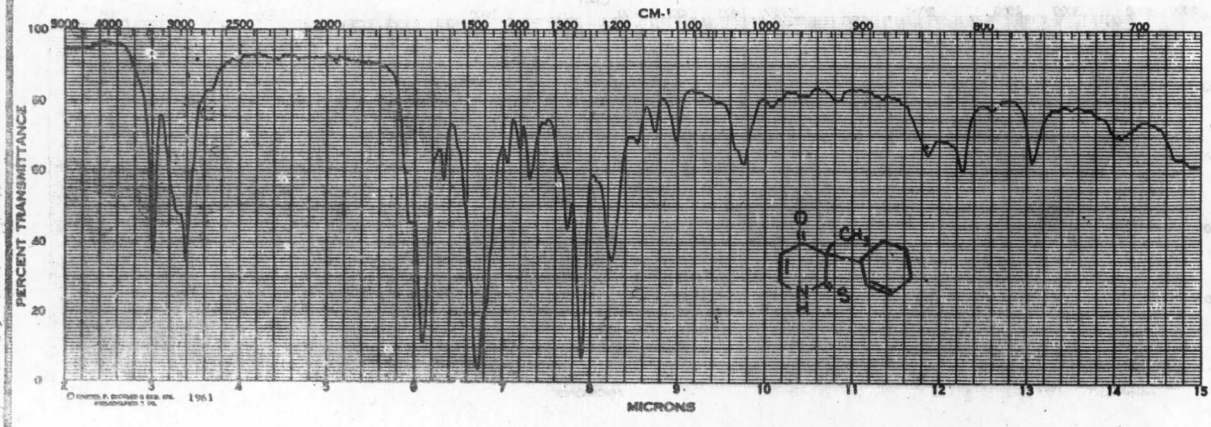
3-(2-CYCLOHEXENYL)-3-METHYL-2-THIOXO-4(1H)-PYRIDONE

$C_{12}H_{15}NOS$ Mol. Wt. 221.32



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

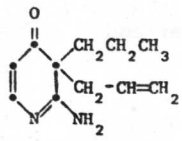
KBr Wafer



38025P

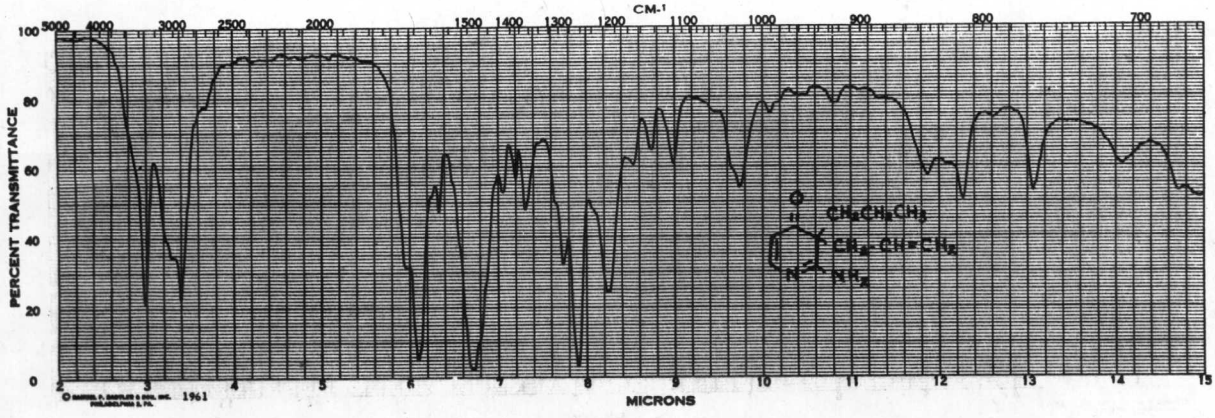
3-ALLYL-2-AMINO-3-PROPYL-4(3H)-PYRIDONE

$C_{11}H_{16}N_2O$ Mol. Wt. 192.26



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

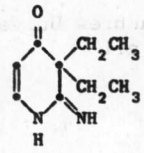
KBr Wafer



38026P

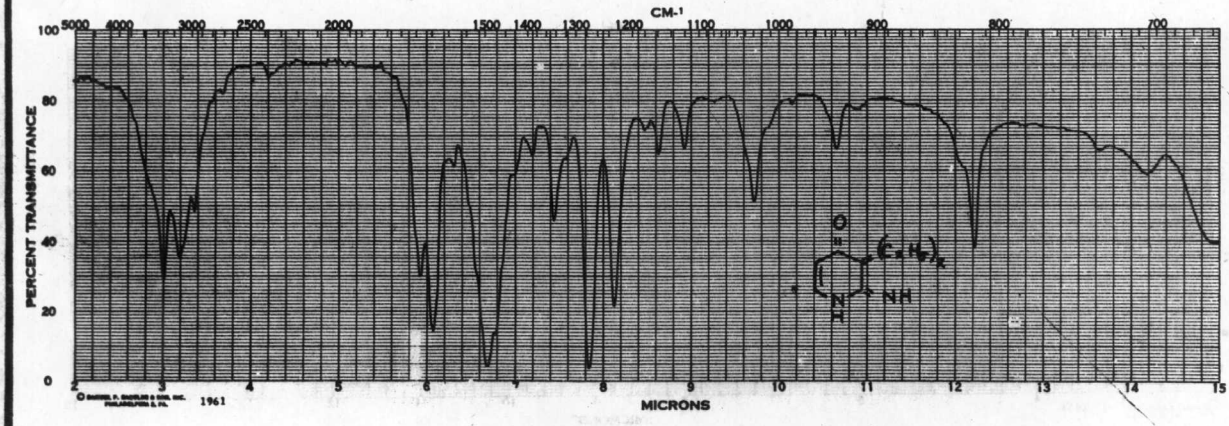
3,3-DIETHYL-2,3-DIHYDRO-2-IMINO-4(1H)-PYRIDONE

$C_9H_{14}N_2O$ Mol. Wt. 166.22



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

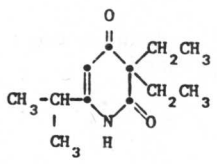
KBr Wafer



38027P

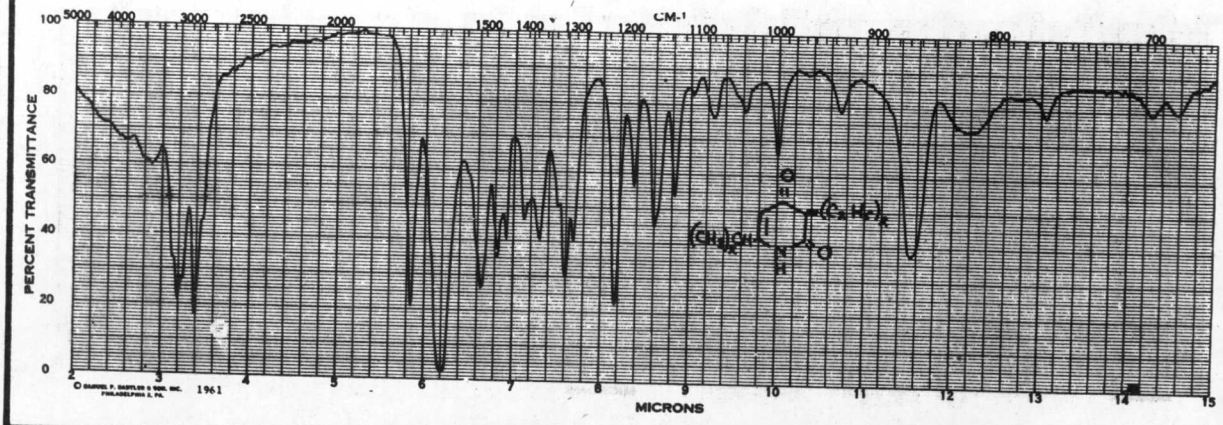
3,3-DIETHYL-6-ISOPROPYL-2,4(1H,3H)-PYRIDINEDIONE

$C_{12}H_{19}NO_2$ Mol. Wt. 209.29



Source of Sample: F. Hoffmann-La Roche & Co., Ltd.
Basle, Switzerland

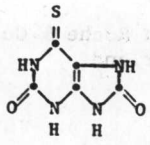
KBr Wafer



38028P

6-THIOURIC ACID

$C_5H_4N_4O_2S$ Mol. Wt. 184.18



Source of Sample: F. Bergmann, Hebrew University
Jerusalem, Israel

KBr Wafer