

SADTLER RESEARCH LABORATORIES, INC.

STANDARD INFRARED PRISM SPECTRA

CREATIVE CHEMISTS SINCE 1874

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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.

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SADTLER STANDARD SPECTRA

This 1976 supplement of 2,000 spectra to the Sadtler Standard Spectra collection brings the total collection to 51,000 infrared prism spectra determined in the 2 to 15 micron region (5000 to $\sim 665\text{ cm}^{-1}$).

Presently all spectra are prepared at Sadtler Research Laboratories on a Beckman IR-4 spectrophotometer from samples donated by scientists in universities and industries throughout the world.

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 mullied 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.

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

Continuous updating of the collection is taking place to provide the best possible data. Although the spectra at the beginning of the collection, published over 15 years ago, do not always appear to be of optimum quality, it should be remembered that more recent advances in instrumentation and techniques have improved spectra quality. Earlier spectra are continuously reviewed and replaced when necessary, if a sample is available.

Samples of 98% pure compounds are continually being sought, it is only due to the generosity of those donors whose names appear as the "Source of Sample" that we can offer these spectra to scientists. Our continued thanks are expressed to these donors.

The following five indexes accompany the Sadtler Standard Spectra:

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

The first four are composite indexes containing entries for 51,000 prism spectra and corresponding spectrum numbers for the 51,000 Sadtler Standard Grating Spectra, the 40,000 Sadtler Ultraviolet Spectra and the 24,000 Sadtler Nuclear Magnetic Resonance Spectra.

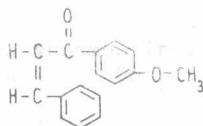
WE SUGGEST THAT THE INTRODUCTIONS TO THE VARIOUS INDEXES BE READ CAREFULLY TO ASSURE THE BEST UTILIZATION OF THEIR APPLICATIONS. We also call to your attention that spectra of these same compounds (49,001 - 51,000) are also available in the Sadtler Infrared Grating Spectra publication.

49001

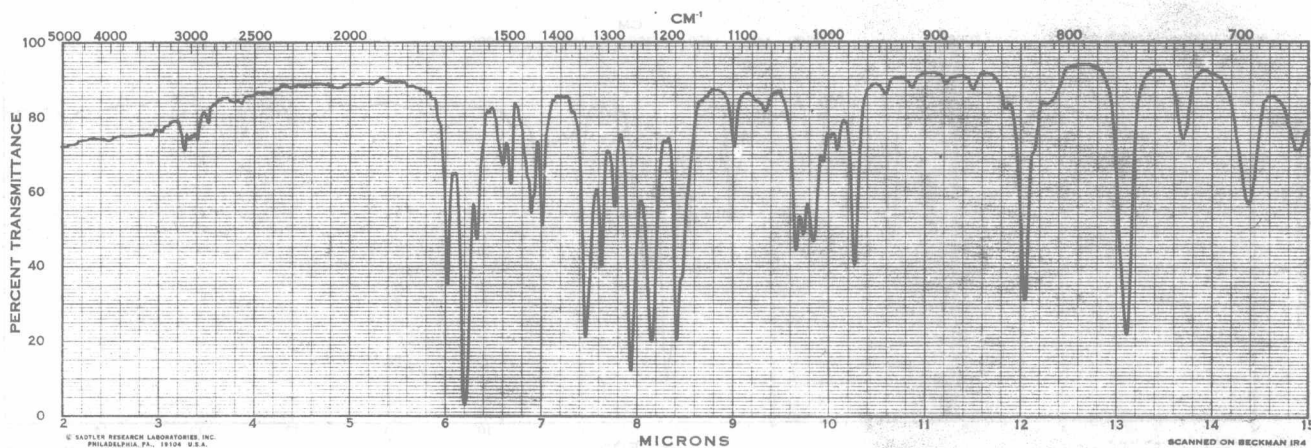
cis-4'-METHOXYCHALCONE

 $C_{16}H_{14}O_2$ Mol. Wt. 238.29

M.P. 104-106°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

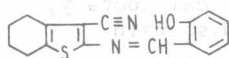
KBr Wafer



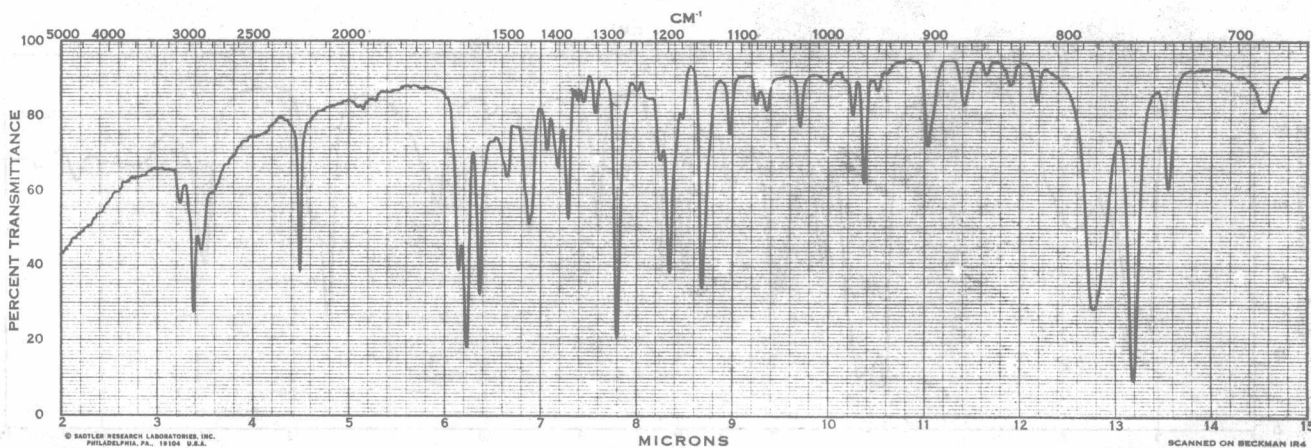
49002

2-(SALICYLIDENEAMINO)-4,5,6,7-TETRAHYDROBENZO[b]-
THIOPHENE-3-CARBONITRILE $C_{16}H_{14}N_2OS$

Mol. Wt. 282.37

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49003

3-[4-(DIETHYLAMINO) -o-TOLYL]RHODANINE

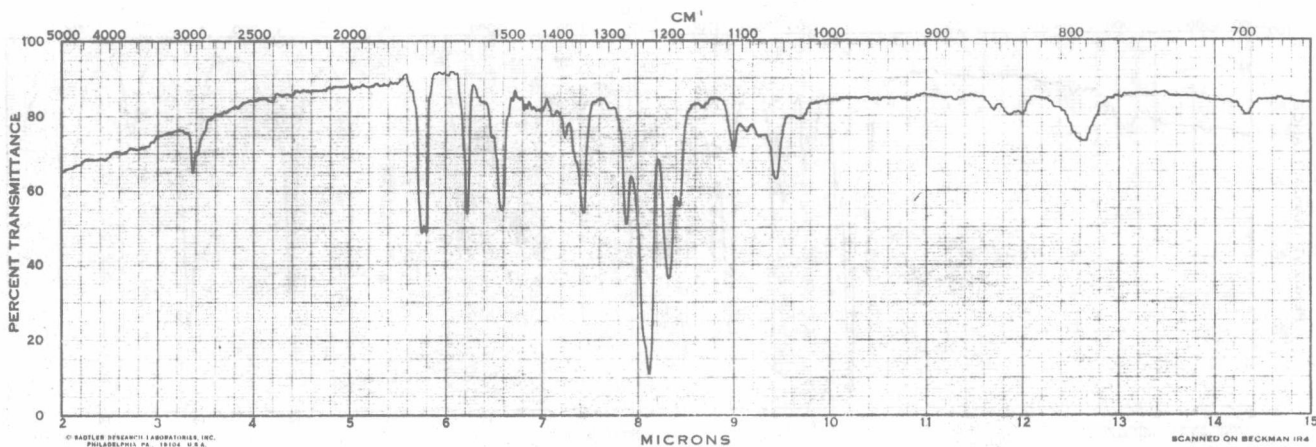
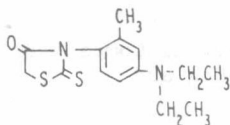
 $C_{14}H_{18}N_2OS_2$

Mol. Wt. 294.44

M.P. 123°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49004

4-AMINO-1H-PYRAZOLO[3,4-d]PYRIMIDIN-6-OL

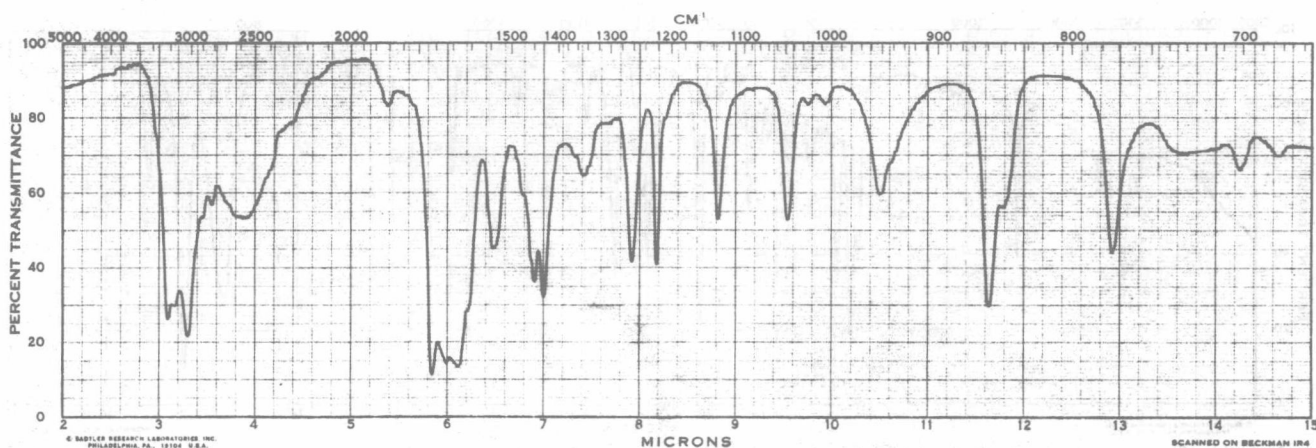
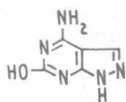
 $C_5H_5N_5O$

Mol. Wt. 151.13

M.P. > 320°C

Source of Sample: Aldrich Chemical Company,
Milwaukee, Wisconsin

KBr Wafer

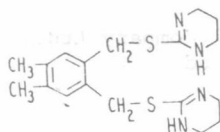


49005

2,2' - [(4,5-DIMETHYL-O-PHENYLENE) BIS (METHYLENETHIO)] BIS -
[1,4,5,6-TETRAHYDROPYRIMIDINE], DIHYDROCHLORIDE

 $C_{18}H_{26}N_4S_2 \cdot 2HCl$

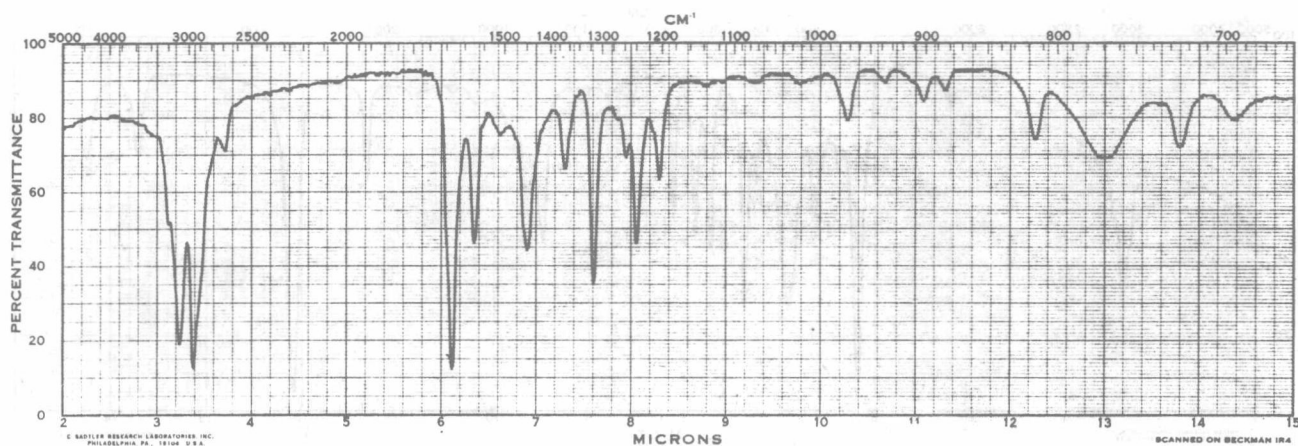
Mol. Wt. 435.48



• 2HCl

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer

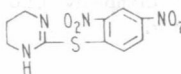


49006

2 - [(2,4-DINITROPHENYL) THIO] - 1,4,5,6-TETRAHYDROPYRIMIDINE,
MONOHYDROCHLORIDE

 $C_{10}H_{10}N_4O_4S \cdot HCl$

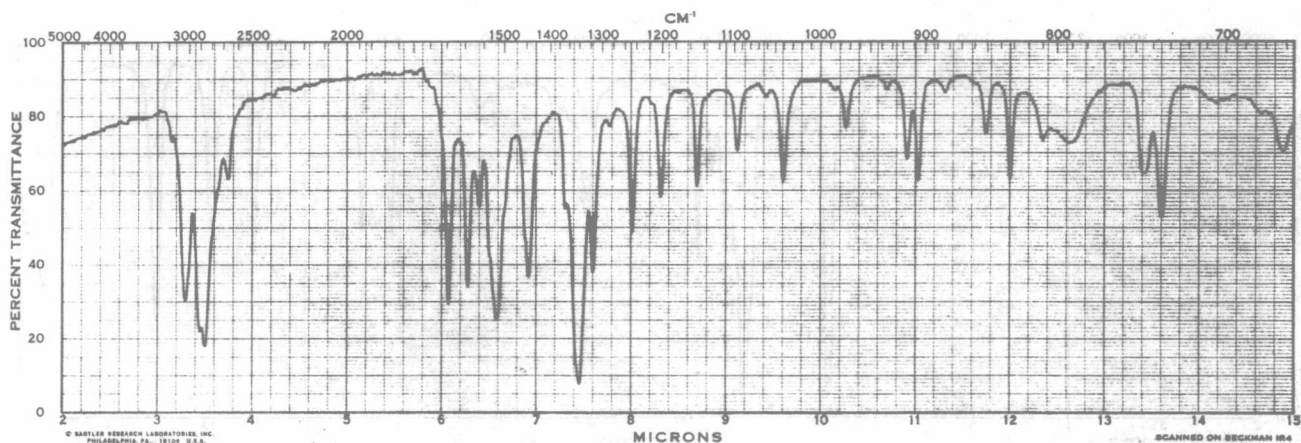
Mol. Wt. 318.74



• HCl

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49007

2',4'-DIMETHYLACETOPHENONE, AZINE

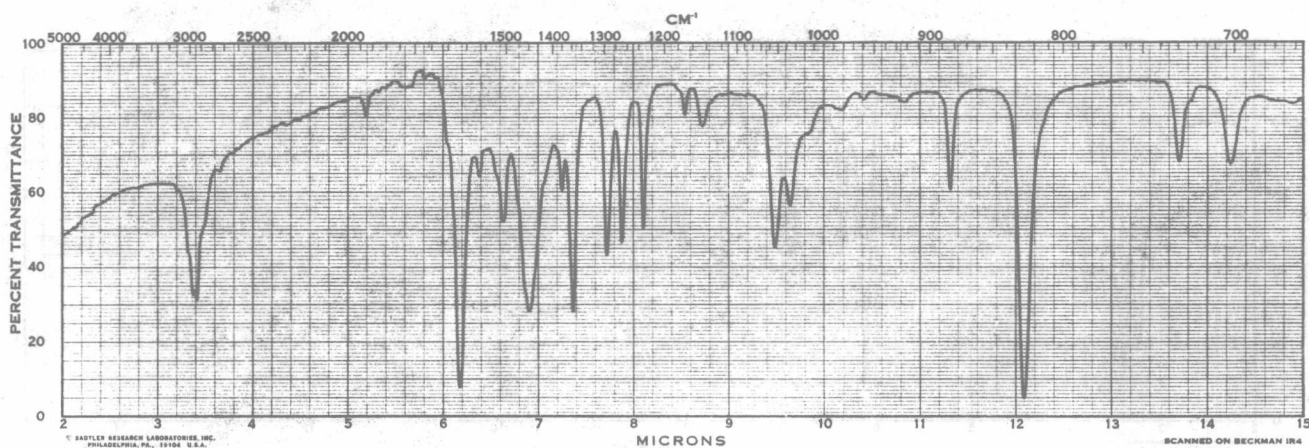
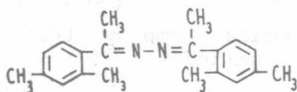
 $C_{20}H_{24}N_2$

Mol. Wt. 292.43

M.P. 82-85°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49008

3'-NITROACETOPHENONE, AZINE

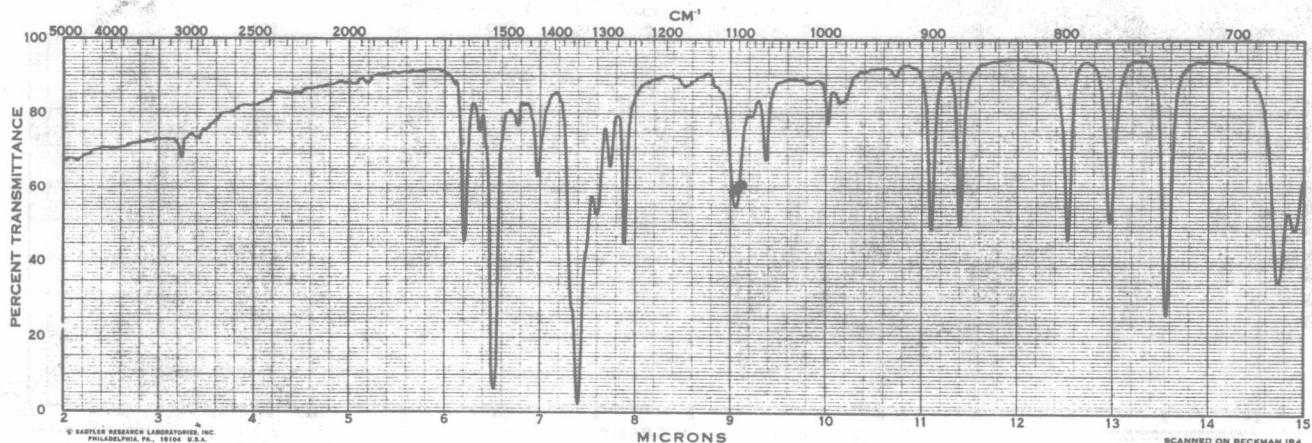
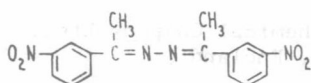
 $C_{16}H_{14}N_4O_4$

Mol. Wt. 326.31

M.P. 198-201°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49009

4'-HYDROXYACETOPHENONE, AZINE

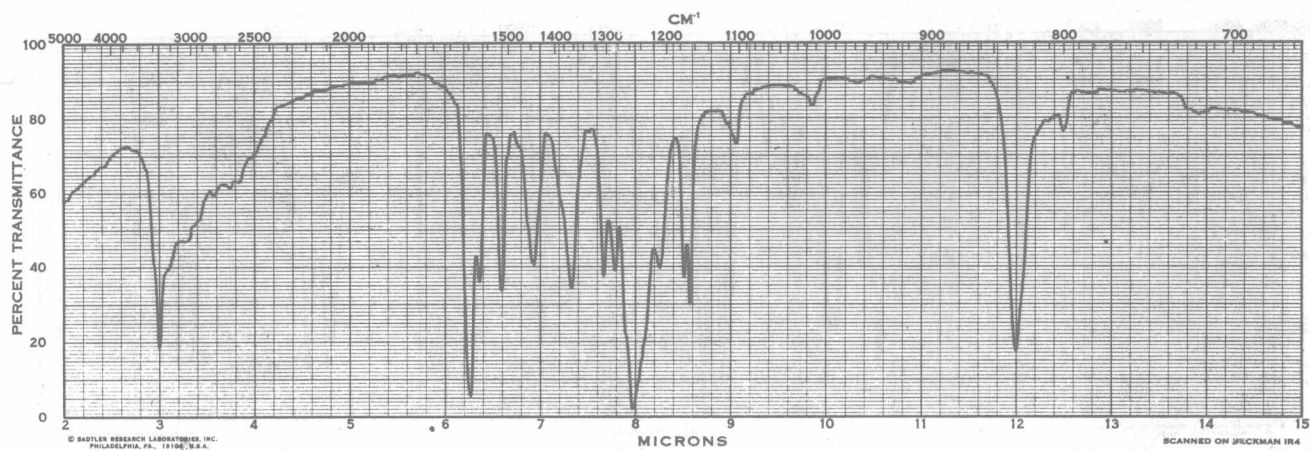
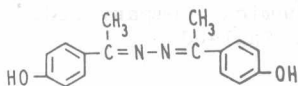
 $C_{16}H_{16}N_2O_2$

Mol. Wt. 268.32

M.P. 225-227.5°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49010

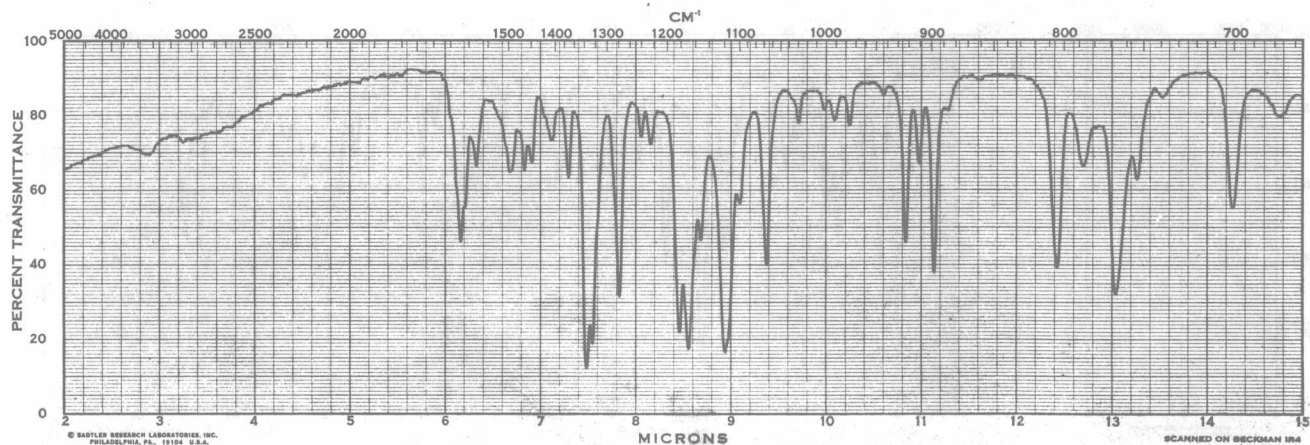
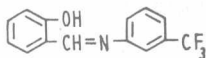
o-[N-(α,α,α -TRIFLUORO-m-TOLYL)FORMIMIDOYL]PHENOL $C_{14}H_{10}F_3NO$

Mol. Wt. 265.24

M.P. 79.5-82°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



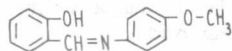
49011

o-[N-(p-METHOXYPHENYL) FORMIMIDOYL] PHENOL

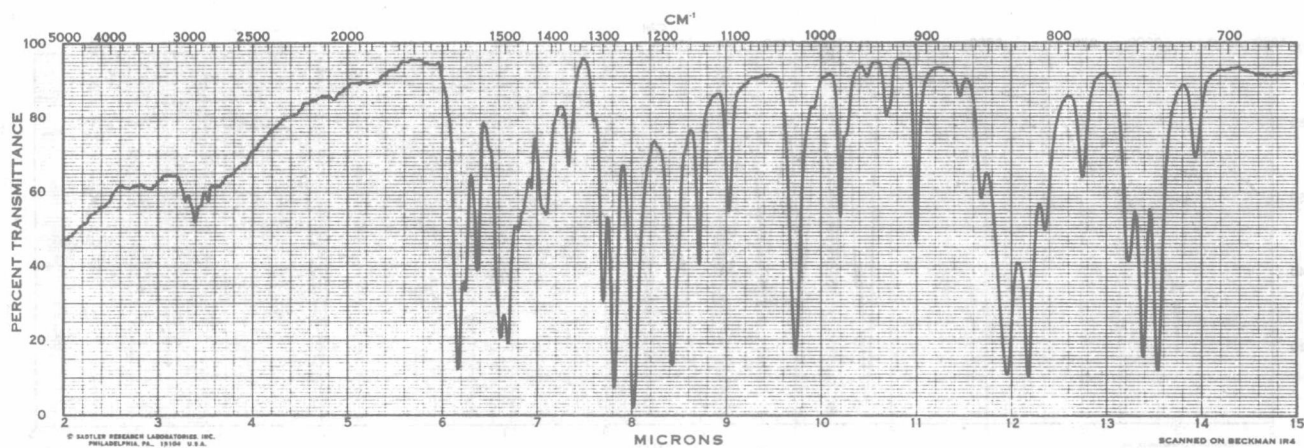
 $C_{14}H_{13}NO_2$

Mol. Wt. 227.27

M.P. 81.5-83°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



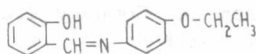
49012

o-[N-(p-ETHOXYPHENYL) FORMIMIDOYL] PHENOL

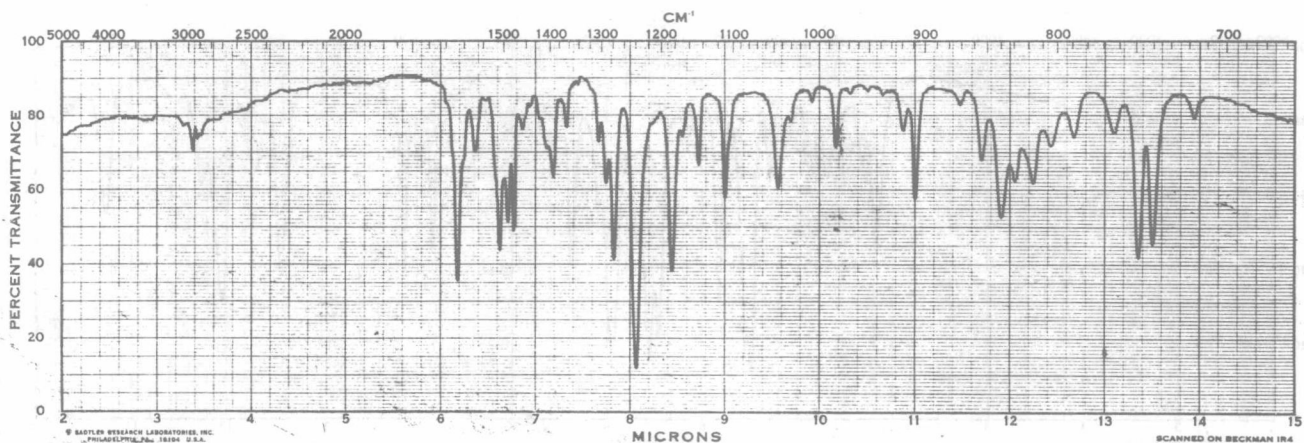
 $C_{15}H_{15}NO_2$

Mol. Wt. 241.29

M.P. 91-92.5°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



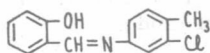
49013

5-[N-(3-CHLORO-p-TOLYL)FORMIMIDOYL]PHENOL

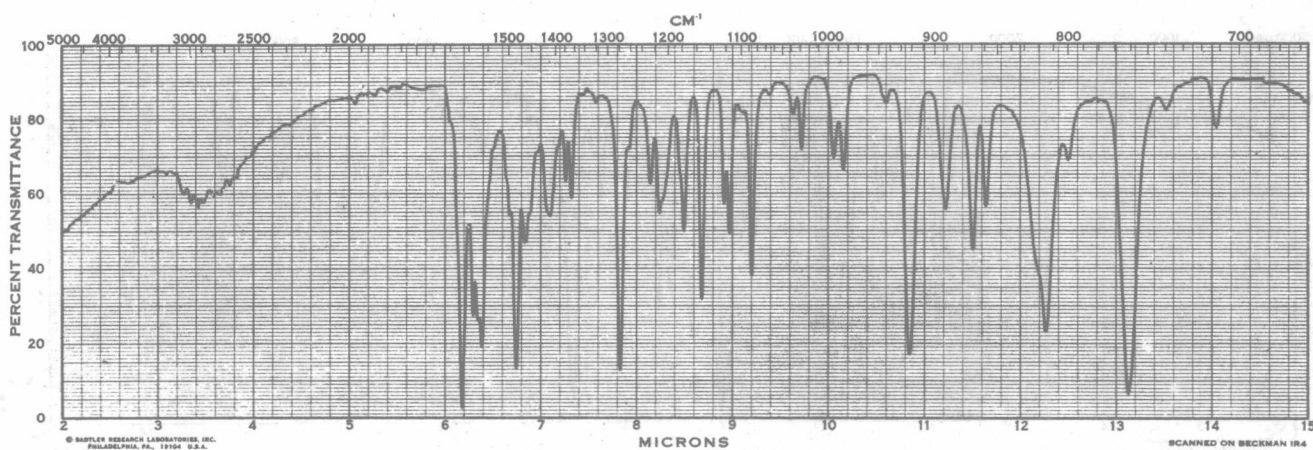
 $C_{14}H_{12}ClNO$

Mol. Wt. 245.71

M.P. 97-99°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



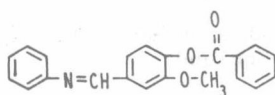
49014

2-METHOXY-4-(N-PHENYLFORMIMIDOYL)PHENOL, BENZOATE

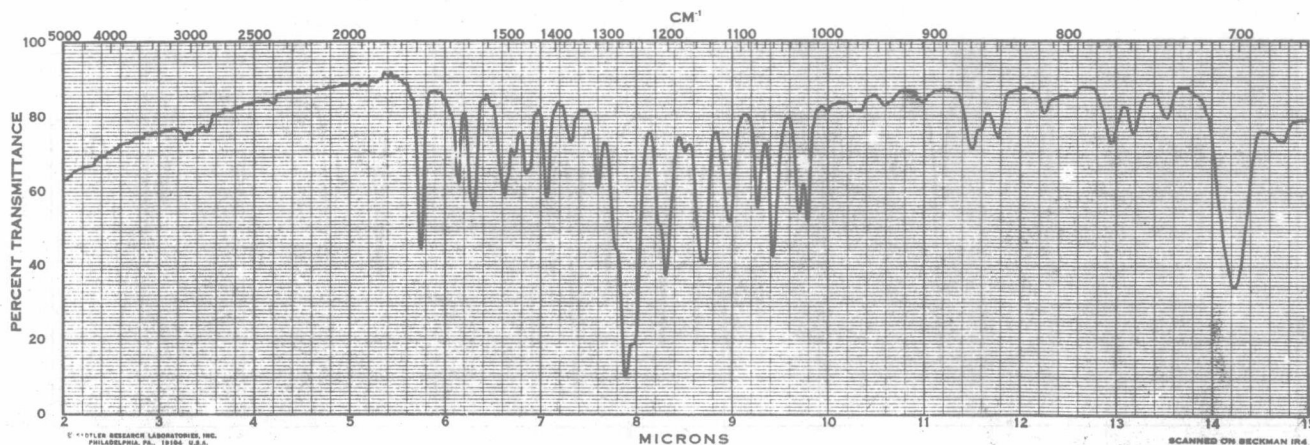
 $C_{21}H_{17}NO_3$

Mol. Wt. 331.37

M.P. 107-110°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49015

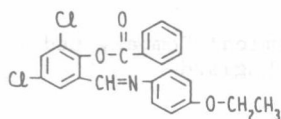
2,4-DICHLORO-6-[N-(p-ETHOXYPHENYL) FORMIMIDOYL] PHENOL,
BENZOATE

$C_{22}H_{17}Cl_2NO_3$

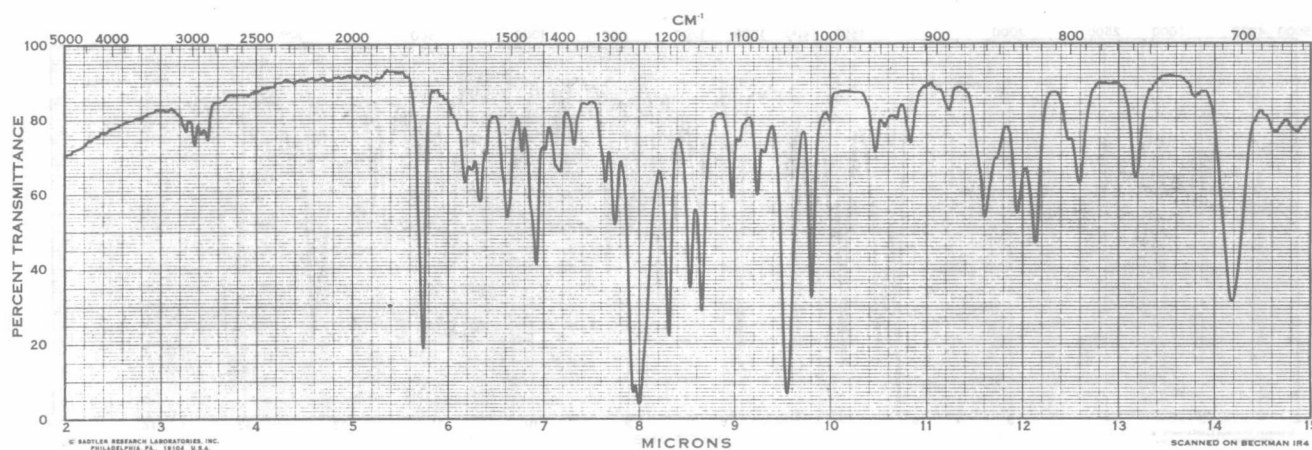
Mol. Wt. 414.29

M.P. 115-116°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England



KBr Wafer



49016

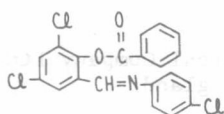
2-[N-(p-CHLOROPHENYL) FORMIMIDOYL]-4,6-DICHLOROPHENOL,
BENZOATE

$C_{20}H_{12}Cl_3NO_2$

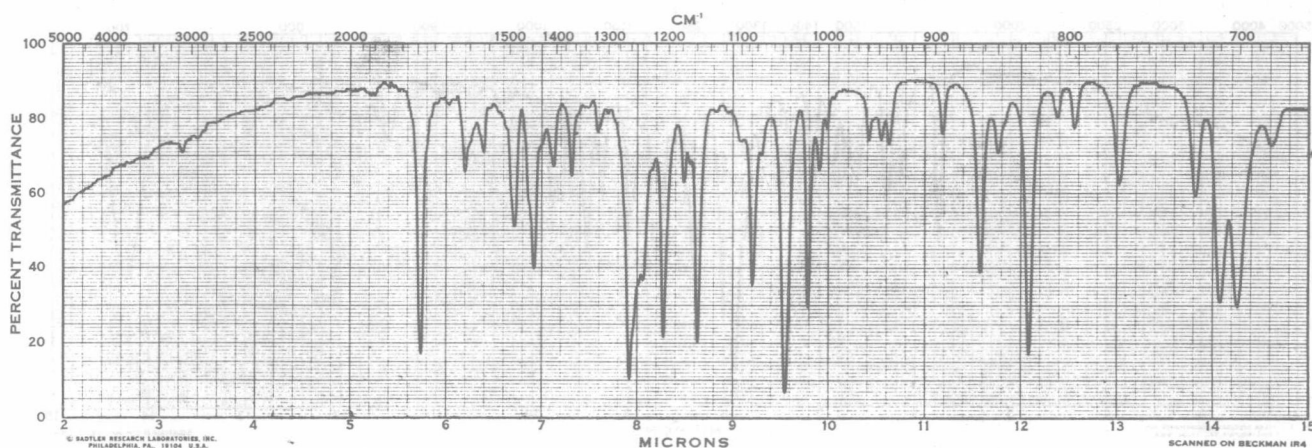
Mol. Wt. 404.68

M.P. 135.5-137°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England



KBr Wafer



49017

2-METHOXY-4-[N-(α,α,α -TRIFLUORO-m-TOLYL) FORMIMIDOYL] PHENOL,
BENZOATE

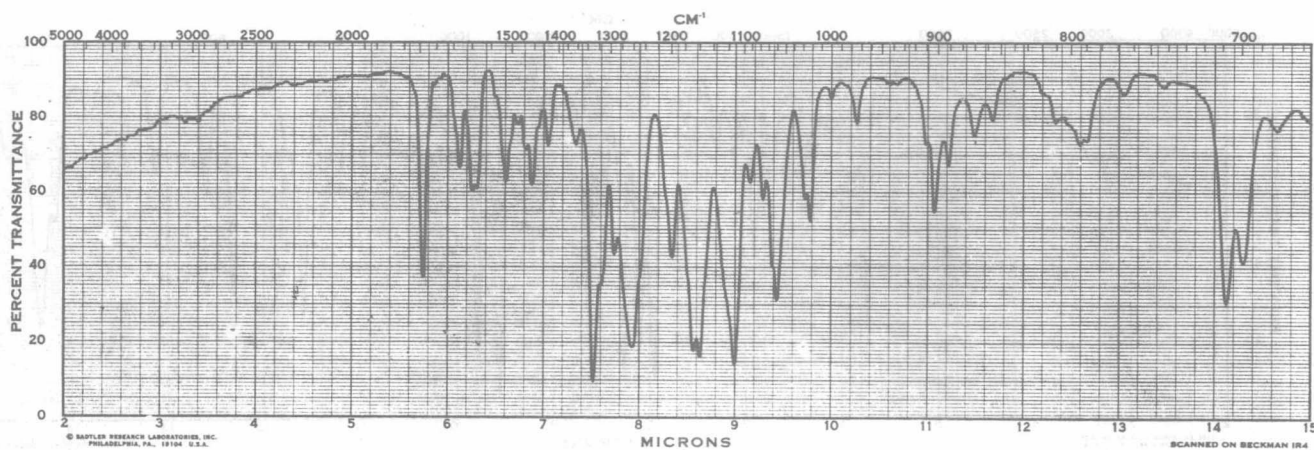
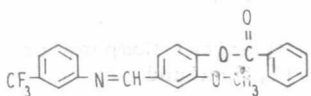
 $C_{22}H_{16}F_3NO_3$

Mol. Wt. 399.37

M.P. 102-104°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49018

2,4-DICHLORO-6-[N-(α,α,α -TRIFLUORO-m-TOLYL) FORMIMIDOYL]-
PHENOL, BENZOATE

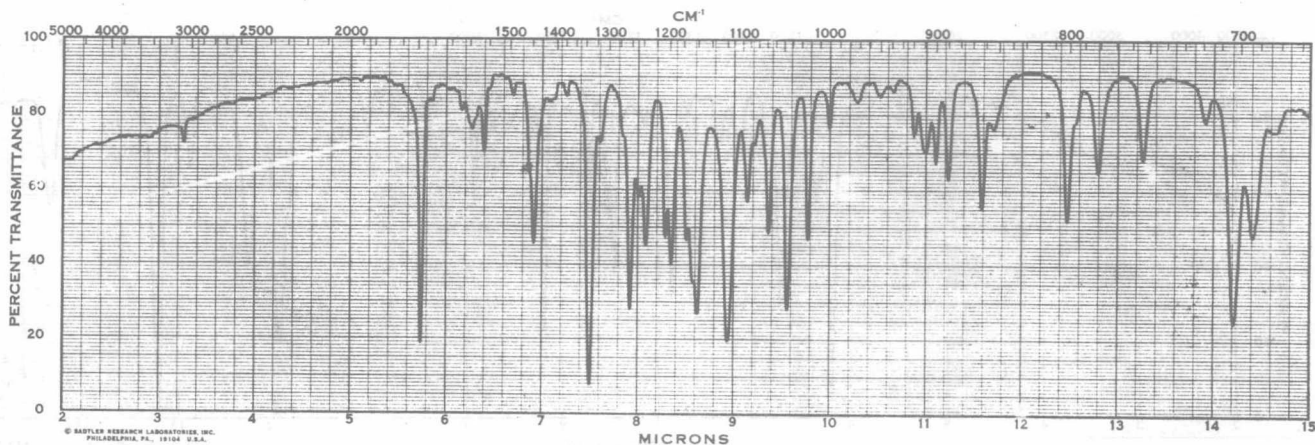
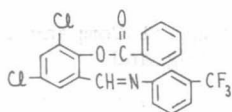
 $C_{21}H_{12}Cl_2F_3NO_2$

Mol. Wt. 438.24

M.P. 155-156°C

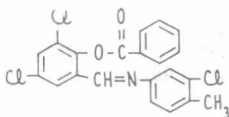
Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49019

2-[N-(3-CHLORO-p-TOLYL) FORMIMIDOYL] -4,6-DICHLOROPHENOL,
BENZOATE

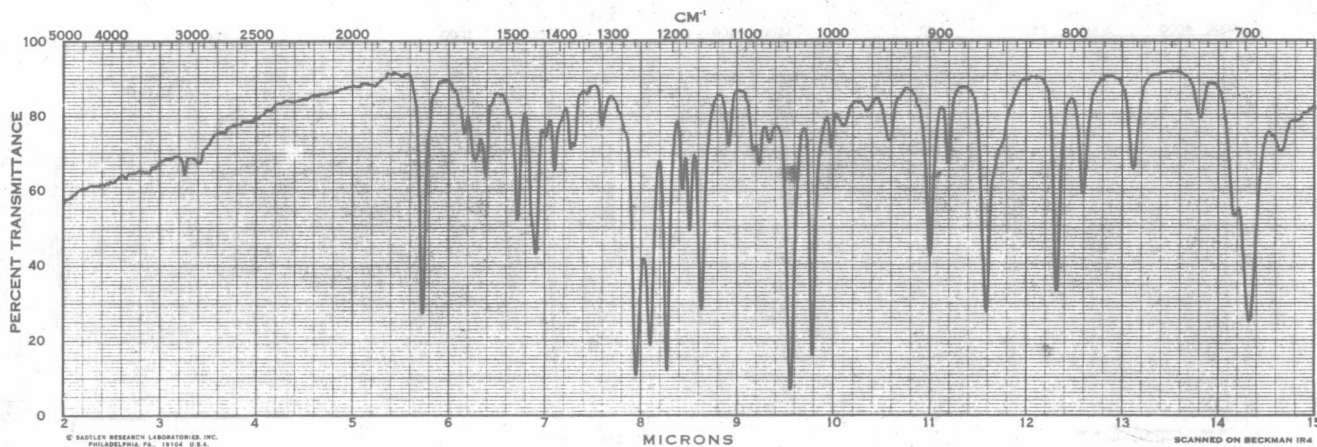

 $C_{21}H_{14}Cl_3NO_2$

Mol. Wt. 418.71

M.P. 152-153°C

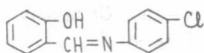
Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49020

o-[N-(p-CHLOROPHENYL) FORMIMIDOYL] PHENOL

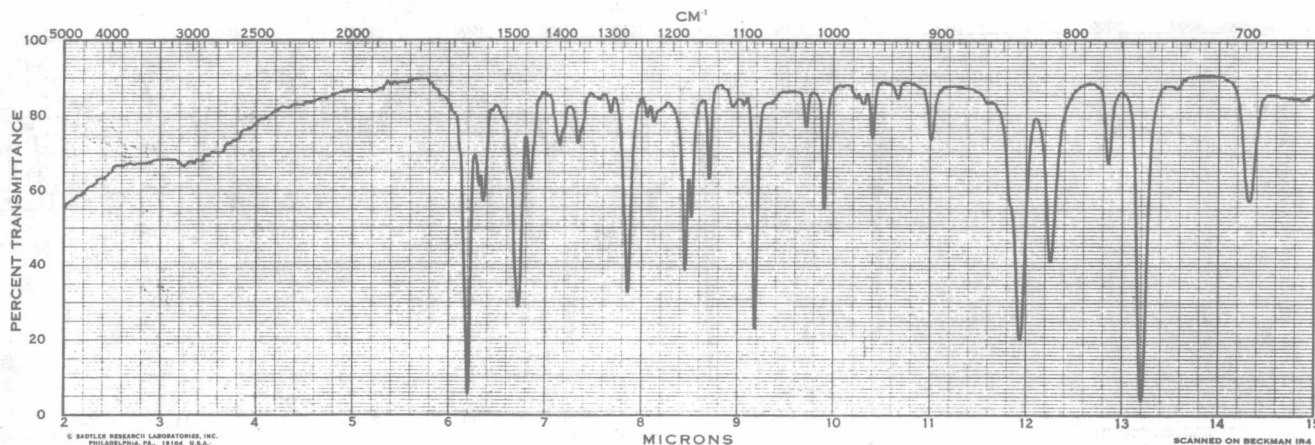

 $C_{13}H_{10}ClNO$

Mol. Wt. 231.68

M.P. 101-103°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49021

3-[p-[(2-CYANOETHYL) METHYLAMINO] PHENYL]-2-(p-NITROPHENYL)-
ACRYLONITRILE

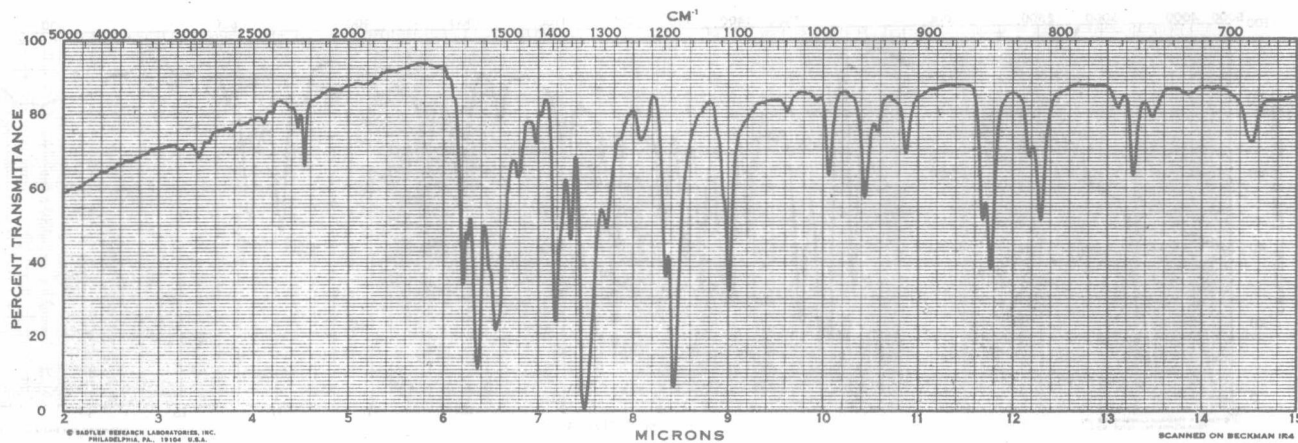
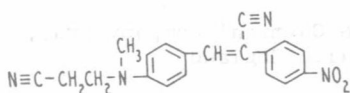
 $C_{19}H_{16}N_4O_2$

Mol. Wt. 332.36

M.P. 199-200°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49022

2-(p-BROMOPHENYL)-3-[p-[(2-CYANOETHYL) METHYLAMINO] PHENYL]-
ACRYLONITRILE

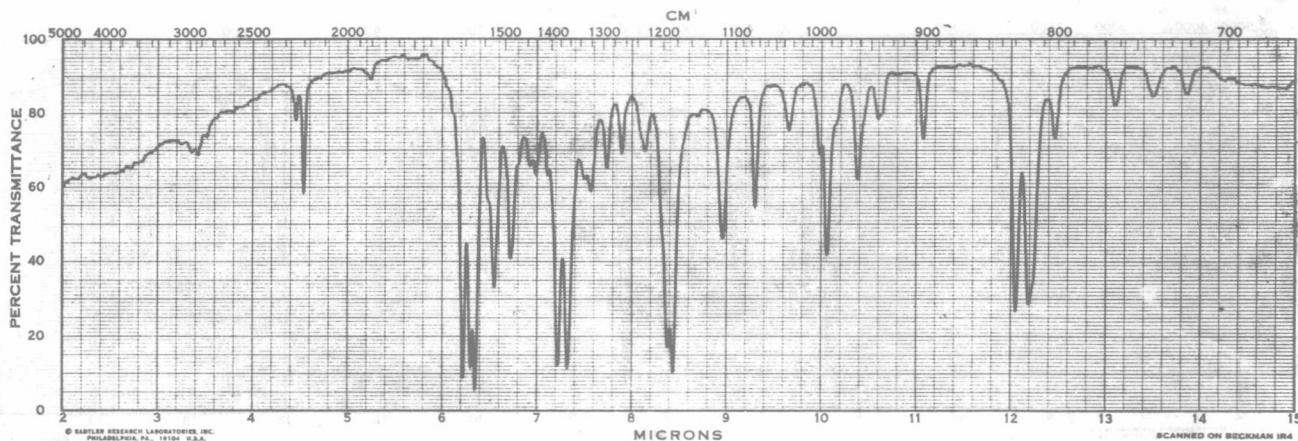
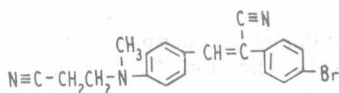
 $C_{19}H_{16}BrN_3$

Mol. Wt. 366.27

M.P. 172-175°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49023

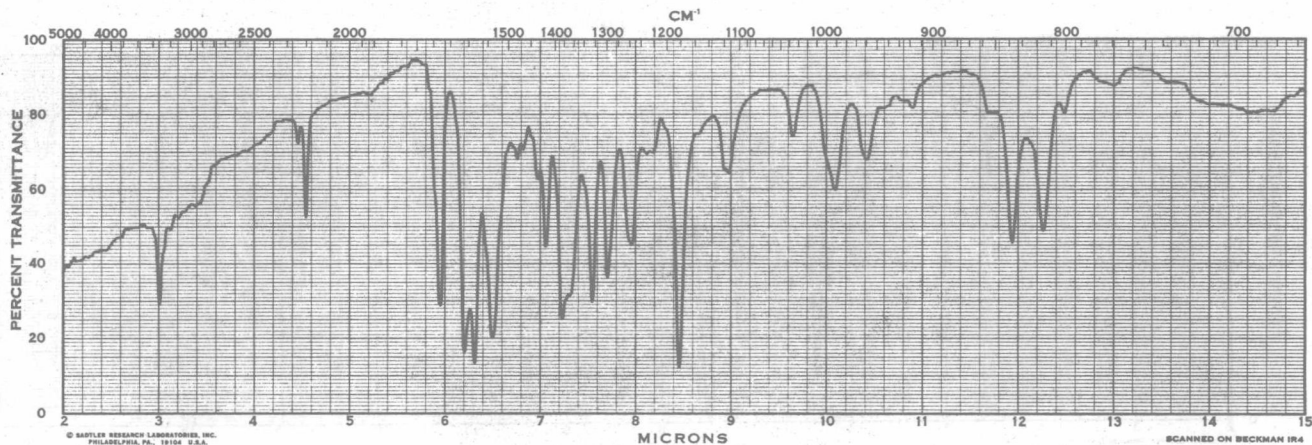
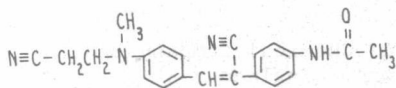
4'-[α -CYANO-p-[(2-CYANOETHYL) METHYLAMINO] STYRYL] ACETANILIDE $C_{21}H_{20}N_4O$

Mol. Wt. 344.42

M.P. 177-179°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49024

3-[p-[(2-CYANOETHYL) METHYLAMINO] PHENYL]-2-(p-METHOXY-PHENYL) ACRYLONITRILE

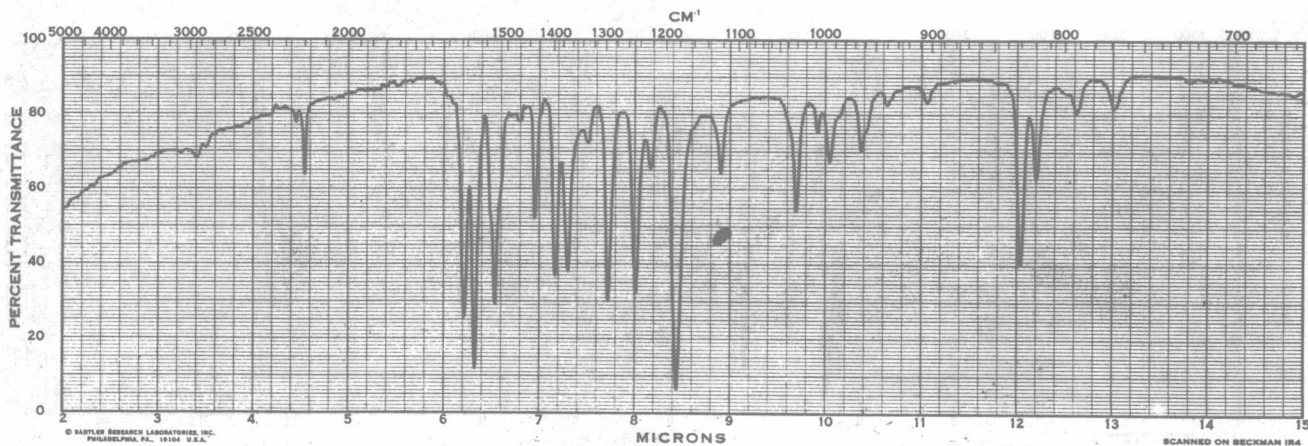
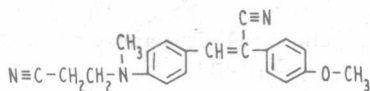
 $C_{20}H_{19}N_3O$

Mol. Wt. 317.39

M.P. 143-145°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49025

2-(p-CHLOROPHENYL)-3-[p-[(2-CYANOETHYL) METHYLAMINO] PHENYL]-
ACRYLONITRILE

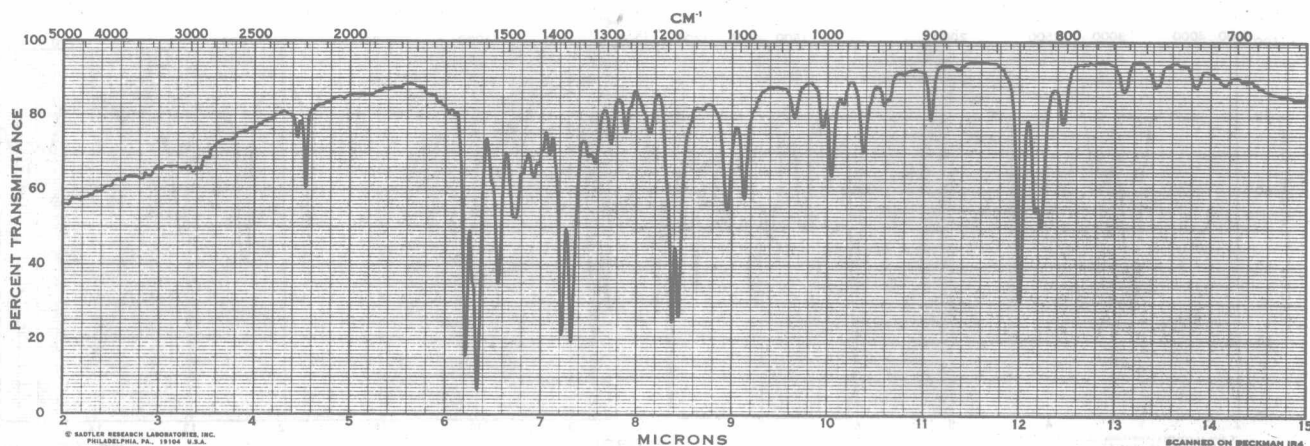
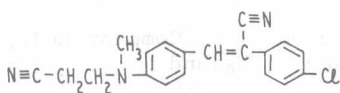
 $C_{19}H_{16}ClN_3$

Mol. Wt. 321.81

M.P. 165-167°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer



49026

2-HYDRAZINO-5-NITROPYRIDINE

 $C_5H_6N_4O_2$

Mol. Wt. 154.13

M.P. 210°C

Source of Sample: Maybridge Chemical Company Ltd.,
N. Cornwall, England

KBr Wafer

