

SPEX

HIPURE

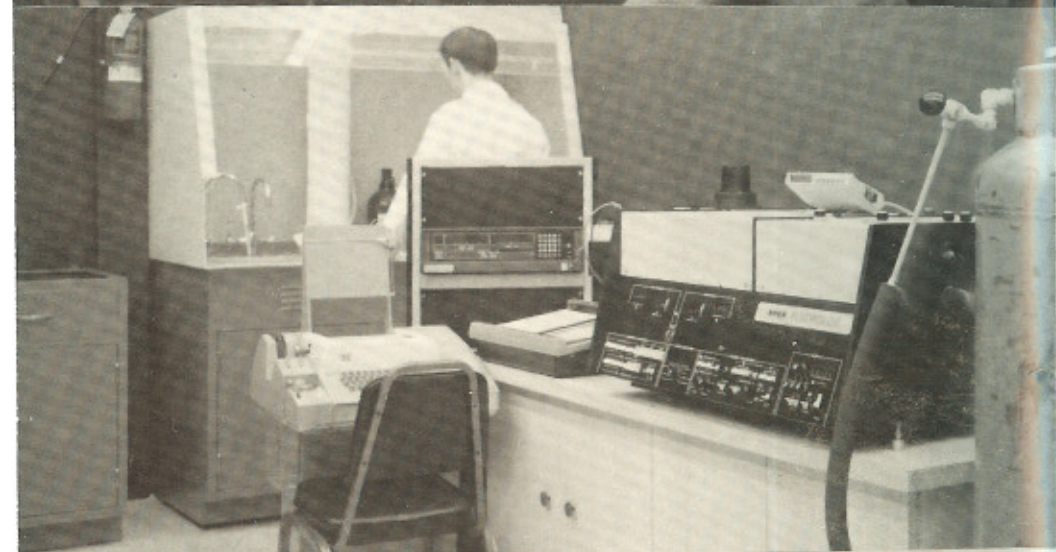
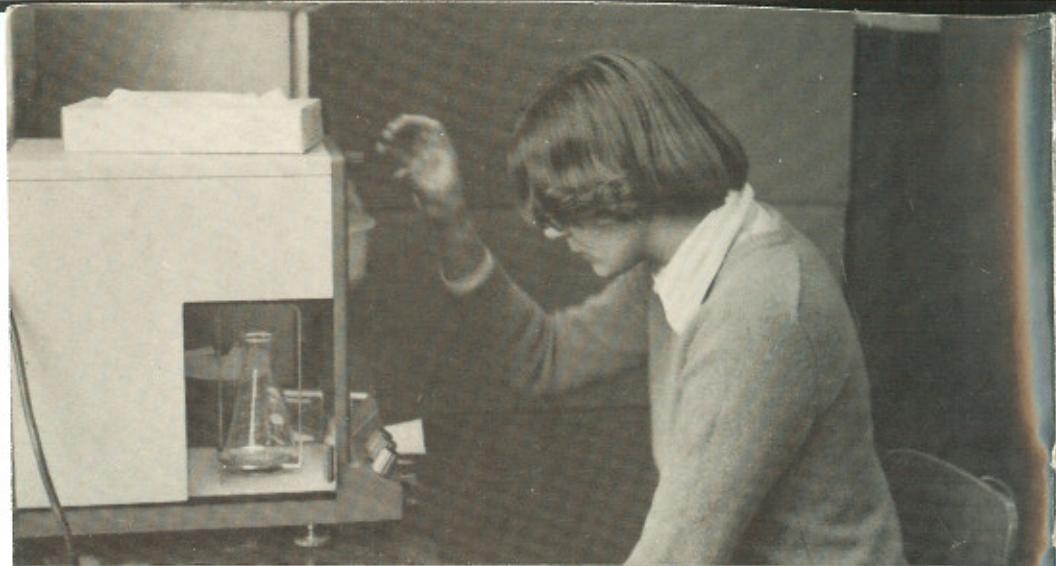
MATERIALS

6-9_s

7-9_s

B								
AL	SI	P	S					
CO	NI	CU	ZN	GA	GE	AS	SE	
RH	PD	AG	CD	IN	SN	SB	TE	I
IR	PT	AU	HG	TL	PB	BI		

EU	GD	TB	DY	HO	ER	TM	YB	LU



HiPure

INORGANIC MATERIALS

Analysis Certification

This listing of nearly 500 Spex HiPure inorganic compounds of 71 elements includes purities from 3-9s (99.9% sometimes called 3N) to 7-9s (99.99999% or 7N). The materials, most of which are purified in our own laboratory, have found applications ranging from analytical standards to electrolytes to semiconductors to vacuum coatings.

For the analysis certificate which accompanies each compound, sixty-odd metallic impurities are determined by a semiquantitative optical emission spectrographic method developed at Spex. An assay of major element is furnished as well, since spectrographic purity does not connote stoichiometric purity. This fact needs to be stressed. The composition of many compounds can depart from the theoretical value by several percent, presenting problems in manufacturing processes such as crystal growing, as well as leading to significant errors in preparing spectrochemical standards. (See next page for typical Analysis Certificate.)

Spex is also prepared to undertake some unusual determinations--such as loss on ignition, specific anions, insolubles, isomers, and dissolved gases--and shall gladly quote prices for the additional analytical work. But in all modesty we admit limitations: We cannot provide an isotopic assay, a crystal structure or defect analysis, or parts per billion contaminants.

Providing high-purity chemicals as you require them is a valued opportunity for us. Should you not find what you are looking for in this listing of our HiPure inorganics--perhaps anhydrous salts, coordination complexes, or organometallics--please phone or write to the attention of Warren Miller.

typical



ANALYSIS CERTIFICATE

MATERIAL

Tin Oxide

PURITY

6-9s

FORMULA

SnO_2

LOT NUMBER

07751

QUANTITATIVE ANALYSIS

<u>Element</u>	<u>Theoretical</u>	<u>Analyzed</u>
Sn	78.76	77.3

SEMIQUANTITATIVE ANALYSIS

<u>Element</u>	<u>ppm</u>
Al, Mg	.5 - 1
Si, Fe	.1 - .5

R A R E F I N D S

Some of the HiPure inorganics we have prepared are, to our knowledge, not to be found commercially anywhere else. Among these are materials already in our alphabetical listing as well as unlisted items synthesized or purified on request for particular applications. The following are examples of our past successes; for any special requirements of your own please phone or write to Warren Miller regarding the custom synthesis of your choice.

CaCrO_4	5-9s
SrS	5-9s +
Cu powder - 200 mesh	6-9s
PdO	5-9s
$\text{LaBr}_3 \cdot 7\text{H}_2\text{O}$	5-9s +
$\text{CeCl}_3 \cdot 6\text{H}_2\text{O}$	5-9s +
$[(\text{SO}_2)\text{IrCl}(\text{CO})[(\text{C}_6\text{H}_5)_3\text{P}]_2]$	4-9s
$[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$	5-9s +