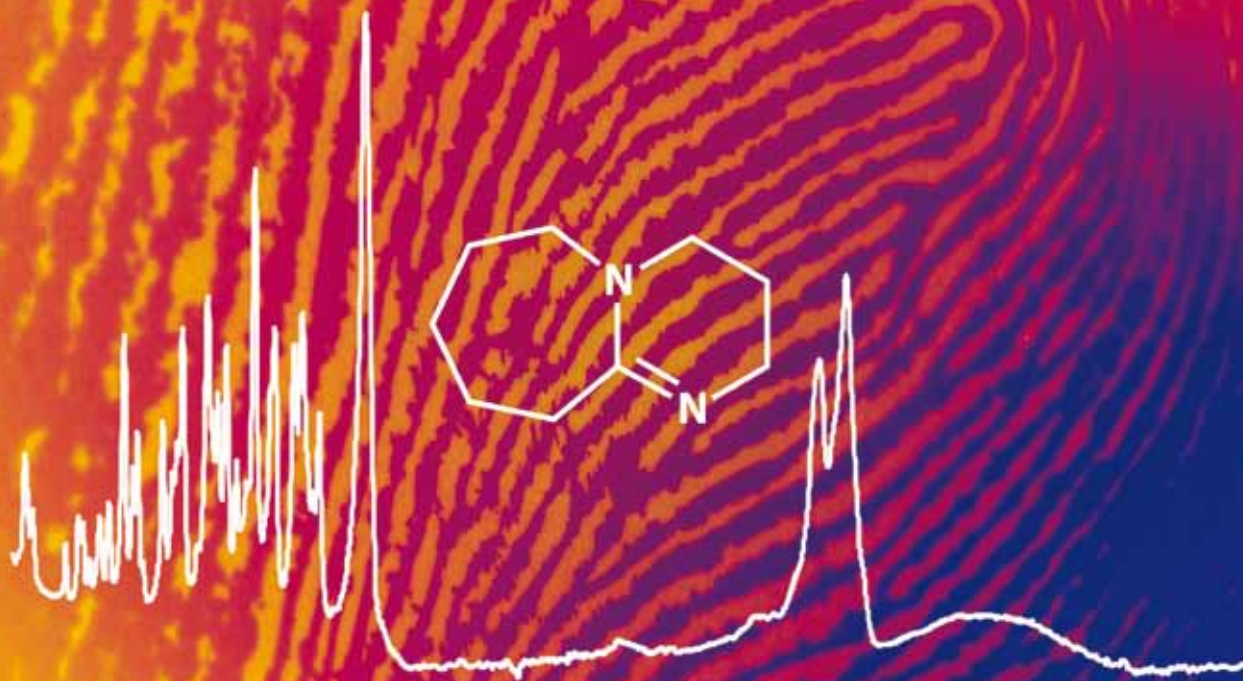


# Infrared Spectroscopy

Serving all your needs for Reagents,  
Solvents & Equipment



Quality Exceeding Expectations

Sigma-Aldrich offers a comprehensive range of products for your IR spectroscopy needs. Decades of experience in the production and supply of IR suitable reagents and solvents are combined with collaborations with high quality industry leading partners. More than 98% of our products are available from stock and will be delivered to you typically within 24h.

## Quality Exceeding Expectations

As a supplier of analytical reagents and standards, quality assurance is of prime importance to us. We employ a comprehensive Quality Assurance System according to EN 29001 and ISO 9001. Each of our products is manufactured to clear, guaranteed specifications.

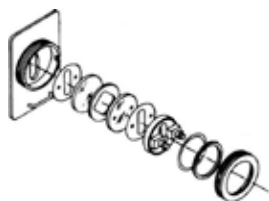
Find our products at [sigma-aldrich.com/ir](https://sigma-aldrich.com/ir)

## Reagents and Solvents for IR Spectroscopy

Our IR reagents and solvents have undergone rigorous purification processes in order to ensure suitability for IR-Spectroscopy. All IR solvents are tested for the absence of foreign absorption bands in the IR spectrum.

Cat. No.	Product Name	Specification	Pack Sizes
31627	Carbon disulfide	≥99.9%, puriss. p.a., ACS reagent, for IR spectroscopy	1 L
87030	Carbon tetrachloride	≥99.5%, for IR spectroscopy	100 mL, 500 mL, 1 L
25670	Chloroform	≥99.5%, for IR spectroscopy	100 mL, 500 mL, 1 L
66743	Dichloromethane	≥99.5%, for IR spectroscopy	250 mL, 1 L
161403	Mineral Oil	for IR spectroscopy	6x12 mL, 1 L
76235	Paraffin Oil	for IR spectroscopy	500 mL
34919	Potassium bromide	for IR spectroscopy	100 g, 6x100 g
378860	Sodium Chloride	optical grade, 99.9% trace metal basis	10 g, 50 g
78520	Tetrachloroethylene	≥99.8%, for IR spectroscopy	100 mL

# Sample Holders, Cells and Crystal Windows



## Demountable Liquid-Cell Kit

Useful for studying mulls, films, solutions, and viscous liquids. Demountable windows make re-polishing and replacement easy. Order 32 mm windows separately. Liquid cells require a drilled front window and an undrilled back window.



## Demountable Gas Cell

For IR analysis of pure gases or mixtures in which the components are present in concentrations of at least 5 to 10%. Cell is readily disassembled for cleaning. Requires two undrilled 32 mm diam. crystal windows (not included).

Description	Cat. No.
Demountable liquid-cell kit	Z112003
Replacement PTFE stopper	Z111996
Replacement PTFE gasket	Z112011
Replacement PTFE O-ring	Z176613
Demountable gas cell, 50 mm path	Z111953
Replacement O-ring and gasket	Z111988



## Sealed Pathlength Cells

Complete cells for liquid samples. Cell needle plate is amalgamated to top window to maintain leak proof seal. Accurately calibrated and labeled. Two PTFE-stoppered ports facilitate filling, emptying, and flushing.

Material	Pathlength (mm)	Volume (mL)	Cat. No.
NaCl	0.015	0.09	Z123099
	0.025	0.125	Z123110
	0.05	0.20	Z123137
	0.1	0.35	Z123153
	0.2	0.70	Z123188
	0.5	1.5	Z123218
	1.0	3.0	Z123234

Material	Pathlength (mm)	Volume (mL)	Cat. No.
KBr	0.015	0.09	Z123102
	0.025	0.125	Z123129
	0.05	0.20	Z123145
	0.1	0.35	Z123161
	0.2	0.70	Z123196
	0.5	1.5	Z123226
	1.0	3.0	Z123242



## More cells and sample holders for IR spectroscopy

- Magnetic holders and Presslok demountable cell holders
- PTFE, polyethylene and Real Crystal® IR sample cards
- Suprasil® quartz cuvettes with 4 polished windows for Raman spectroscopy

Please find our complete product listing at [sigma-aldrich.com/irholders](http://sigma-aldrich.com/irholders)



## Round Crystal Windows

Cut and polished quality round crystal windows in a wide variety of sizes, thickness and materials. 32 mm windows are suitable for demountable liquid and gas cell holders and are available in either drilled and undrilled versions.

Material	Diam. × Thickness (mm)	Cat. No.	Note	Material	Diam. × Thickness (mm)	Cat. No.	Note
BaF <sub>2</sub>	25 × 4	Z123625		KRS-5	25 × 2	Z267686	
	32 × 3	Z112135	(undrilled)		25 × 4	Z267694	
	32 × 3	Z112194	(drilled)		32 × 3	Z267708	(undrilled)
			32 × 3		Z267716	(drilled)	
CaF <sub>2</sub>	25 × 2	Z267562		NaCl	25 × 2	Z267724	
	25 × 4	Z267570			25 × 4	Z123595	
	32 × 3	Z267589	(undrilled)		25 × 5	Z267732	
32 × 3	Z267597	(drilled)	32 × 3		Z112100	(undrilled)	
CsI	25 × 4	Z267600			32 × 3	Z112151	(drilled)
Ge	13 × 2	Z267619		Silicon	13 × 2	Z267740	
Irtran-2	25 × 2	Z123633		ZnSe	13 × 2	Z267791	
	32 × 2	Z112143	(undrilled)		25 × 2	Z267805	
	32 × 2	Z112208	(drilled)		25 × 4	Z267813	
KBr	25 × 2	Z267627			32 × 3	Z267821	
	25 × 4	Z123609			32 × 3	Z267848	
	25 × 5	Z267635			49 × 3	Z267856	
	32 × 3	Z112119	(undrilled)		50 × 3	Z267864	
	32 × 3	Z112178	(drilled)				
	38 × 6	Z267643					
	49 × 6	Z267651					
	50 × 3	Z267678					

## Rectangular and Trapezoid Crystals

Material	Dimensions (mm)	Cat. No.	Note
NaCl	11 × 30 × 7	Z102776	rectangular, unpolished, for Aldrich adjustable cell holder
	11 × 30 × 7	Z150673	rectangular, polished, for Aldrich adjustable cell holder
	29.5 × 14.5 × 4	Z150673	rectangular, polished, undrilled, for Beckman® Multi-Cell Mount™
	29.5 × 14.5 × 4	Z150681	rectangular, polished, drilled, for Beckman® Multi-Cell Mount™
	38.5 × 19.5 × 4	Z150657	rectangular, polished, undrilled, for Perkin-Elmer® and Wilks holders
	38.5 × 19.5 × 4	Z150665	rectangular, polished, drilled, for Perkin-Elmer® and Wilks holders
KBr	11 × 30 × 7	Z107611	rectangular, unpolished, for Aldrich adjustable cell holder
	11 × 30 × 7	Z108383	rectangular, polished, for Aldrich adjustable cell holder
	29.5 × 14.5 × 4	Z150738	rectangular, polished, undrilled, for Beckman® Multi-Cell Mount™
	29.5 × 14.5 × 4	Z150746	rectangular, polished, drilled, for Beckman® Multi-Cell Mount™
	38.5 × 19.5 × 4	Z150703	rectangular, polished, undrilled, for Perkin-Elmer® and Wilks holders
	38.5 × 19.5 × 4	Z150711	rectangular, polished, drilled, for Perkin-Elmer® and Wilks holders
Ge	50 × 20 × 2 (45° angles)	Z267910	trapezoid, polished, ATR/MIR prism



Need to polish a crystal window? Check our Crystal-polishing Kit (Z111864), which includes all you need to grind, polish or buff common materials such as NaCl, KBr or CsBr.

For a complete listing of our crystal windows for IR spectroscopy, please visit [sigma-aldrich.com/irwindows](http://sigma-aldrich.com/irwindows)

# Tools for Sample Preparation



## Aldrich® macro-micro KBr pellet die

Pellet die for producing 13 mm diameter KBr pellets. Used in conjunction with a 12 ton lab press and a vacuum pump, it's capable of reducing pressure to 2 mm, to reduce moisture in the sample. Heavy paper inserts in a variety of smaller apertures are available separately for making micropellets. Consists of hardened stainless steel piston and lower section, black anodized aluminum body, optically polished anvils, Viton® seals.

Aldrich® macro-micro KBr pellet die	Z506699
Replacement anvils	Z506729
Replacement base	Z506702
Replacement plunger	Z506737
Replacement Viton® O-rings for base	Z543365
Replacement Viton® O-rings for plunger	Z543373



## Quick Press KBr pellet kit

This hand press is for making transparent KBr pellets (discs). The pellet is formed using only the pressure of a firm handshake applied steadily to the handle. Kit includes a die set for making 7 mm diam. pellets.

Quick Press KBr pellet kit	Z506761
Die set, 2 mm diam.	Z506826
Die set, 4 mm diam.	Z506818
Die set, 7 mm diam.	Z506796
Quick Press SS collar, 2 mm diam.	Z506877
Quick Press SS collar, 4 mm diam.	Z506869
Quick Press SS collar, 7 mm diam.	Z506850
Quick Press hand press only	Z506788
Quick Press sample holder	Z506842



## E-Z Press™

12 ton laboratory press with unibody construction designed to work with the Aldrich macro-micro and similar KBr pellet dies. Built-in pressure gauge and pressure release valve provide accurate control of pressure. Press includes removable handle and base.

E-Z Press™	Z285889
Paper inserts, round, 1.5 mm diam., 200 pc.	Z123293
Paper inserts, round, 3.0 mm diam., 200 pc.	Z123323
Paper inserts, round, 5.0 mm diam., 200 pc.	Z123331
Paper inserts, round, 11.0 mm diam., 200 pc.	Z123315
Paper inserts, rectangular, 1.5 × 9 mm, 200 pc.	Z123307



## Aldrich IR sample prep kit

Contains tools used for the preparation of samples for KBr pellets and mineral oil mulls. Tools packaged in velvet-lined, zippered case. All tools made from quality materials: SS, agate, and borosilicate glass.

Aldrich IR sample prep kit	Z281743
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A complete overview on our offering on tools for IR spectroscopy can be found at [sigmaaldrich.com/irtools](http://sigmaaldrich.com/irtools)



**Expert Technical Service** is only a phone, FAX or email away. If you need help choosing the right reagent, standard or reference material, our technical service representatives will be happy to help you with:

- Product selection
- Obtaining certificates of analysis online
- Using a standard or reference material
- Troubleshooting product performance

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