

CCA-274

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## Low Temperature Infrared Cell

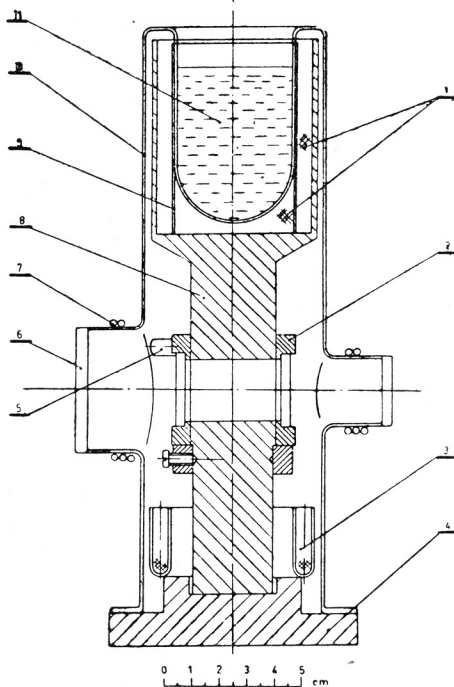
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A simple low temperature cell for infrared absorption measurements of liquid and solid samples is described. It is possible to analyse three samples in turn without dismantling and heating the cell to room temperature.

The figure illustrates some details. The glass container(11) of a specially designed Dewar-type cylinder is filled with liquid air (or other low-tempe-



perature mixture). The heat transfer is accomplished by means of the brass support(8) the metal net(9) and metal powder(1). A ring(2) which holds three samples can be rotated by a magnet action on the iron pin(5), after the flask is evacuated and cooled down. A ring shaped glass plate(3) contains  $P_2O_5$ . Sodium chloride windows(6) are attached to flanged edges by Araldite, and water condensation is prevented by a heating wire(1). The base(4) of the

flask is made of Perspex which maintains good vacuum. The cell is inexpensive and avoids metal-glass connections, of course, at some expense of heat transfer. After *e.g.*, cooling for one hour by liquid air, the temperature of the brass support of  $-130^{\circ}\text{C}$  was obtained. (The room temperature radiation was eliminated by a cotton-wool insulation.).

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### IZVOD

#### Ćelija za snimanje infracrvenih spektara kod niskih temperatura

*T. Magjer*

Opisana je jednostavna ćelija za krute i tekuće uzorke. Konstrukcija izbjegava spoj metal-staklo, a specijalni prstenasti nosač omogućuje analizu 3 uzorka bez rasklapanja ćelije.

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ZAGREB

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