phasenbewegung durch (Figur 3). Erst in der spätern Anaphase lassen sich Chromosomen, die eliminiert werden (E-Chromosomen), und Chromosomen, die nicht eliminiert werden (S-Chromosomen), unterscheiden (Figur 4). Die S-Chromosomen wandern mit gleichmässiger Geschwindigkeit weiter gegen die beiden Pole zu und werden in die Tochterkerne einbezogen. Die Bewegung der E-Chromosomen verlangsamt sich. In der Regel findet eine kurze Rückwanderung statt, so dass die E-Chromosomen nach einiger Zeit wieder in die Nähe der Äquatorebene gelangen (Figur 5). Später versinken sie im Dotter und sind im lebenden Embryo nicht mehr nachweisbar, während die Tochterkerne mit jetzt herabgesetzter Chromosomenzahl allmählich sichtbar werden. In unserm Stamm enthalten künftige Somakerne nach der 3. Furchungsteilung noch 11 der insgesamt 66 Chromosomen[2]. Später wird aus ihnen noch je 1 Chromosom eliminiert, so dass das Weibchen schliesslich 10 Chromosomen in den Somakernen besitzt.

Summary. A method was developed which allows in vivo observation of chromosome elimination in early cleavage divisions of the gall midge *Heteropeza pygmaea.*

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Modification and Use of Plastic Embedding Forms in Electron Microscopy

In our department we have to embed a sizeable number of resin blocks in 1 day. The handling of the available capsules (Beem- or gelatine capsules) has certain disadvantages. During the filling with resin mixture one has to be very careful not to spill resin, which is sticky and hard to remove from tables and racks. The removal of polymerized blocks has to be done by razor blade. Minor injuries and cut fingers occur very easily. The orientation of specimens demands quite complicated techniques (e.g. modification of Beemcapsules, preparation in aluminium foils). In addition, Beemcapsules are relatively expensive. In order to improve the procedure we designed our own embedding forms, which we have called plastiracks.

A negative form is made of Polyvinylchloride. PVC does not bind to the silicone rubber mass, which comes off easily and completely after polymerization. PVC is relatively inexpensive and easy to cut to the necessary shape.

The material of the form should not bind to the resin mixtures used, it should be flexible and durable, and it should sustain heat up to 100°C. We chose therefore a silicone rubber 'Giessmasse (founding mass) 56' from Wacker-Chemie Ltd., Munich, which is thoroughly mixed with 4% (W/W) of hardener T (Wacker, Munich). The mixture has a low viscosity. It has to stand for 2–3 min to allow air bubbles to disappear. The negative form is filled with the silicone rubber mixture. The low viscosity allows the mass to surround every sharp edge on the negative form. Polymerization occurs within 2–3 h at room temperature.

The plastirack can be filled easily with resin mixture and the specimens embedded. After polymerization slight bending allows the hard block to pop out. Plastirack B has low bridges (arrows), thus allowing the 'pie' to be broken up into slices like a chocolate bar. There is no resin residue left on plastiracks. Spilled resin can be scratched off without difficulty.

We have made plastiracks with openings corresponding to Beemcapsules. Later we modified the forms for adaptation to the different LKB specimen-holders and to different methods of oriented embedding. Form A is conventional, form B allows flat embedding and form C shortens the trimming and allows oriented embedding to a certain degree. A similar rubber mold to plastirack C has been described by Rockwell et al.[1]. They draw similar conclusions in regard to epoxy resins. However, there is no indication about long-term use of this form.

We have used the same plastirack over 20 times. The following resin mixtures have been tested: Epon, Apon-Araldite, Maraglass, Vestopal. With the exception of

[1] A. F. Rockwell, P. Norton, J. B. Caulfield and S. I. Roth, Sci. Tools *13*, 9 (1966).

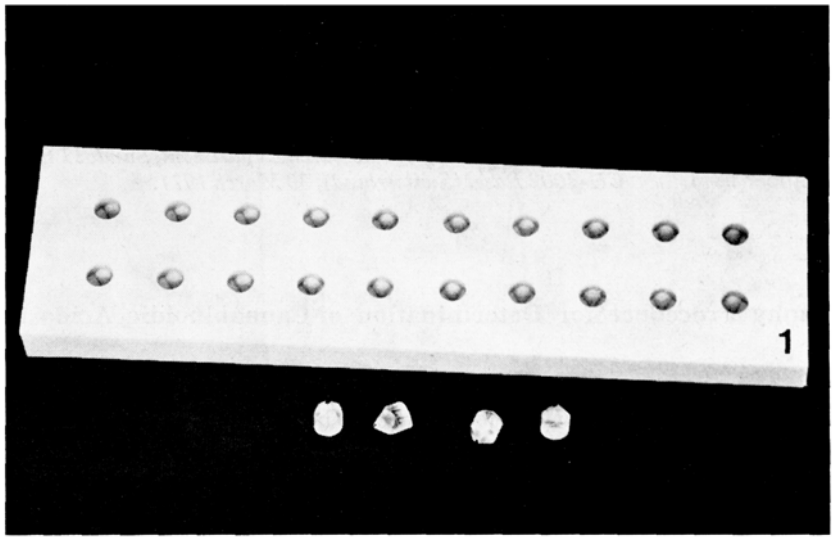

Fig. 1. Plastirack A. Conventional form for block embedding; $^1/_2$ of original size.

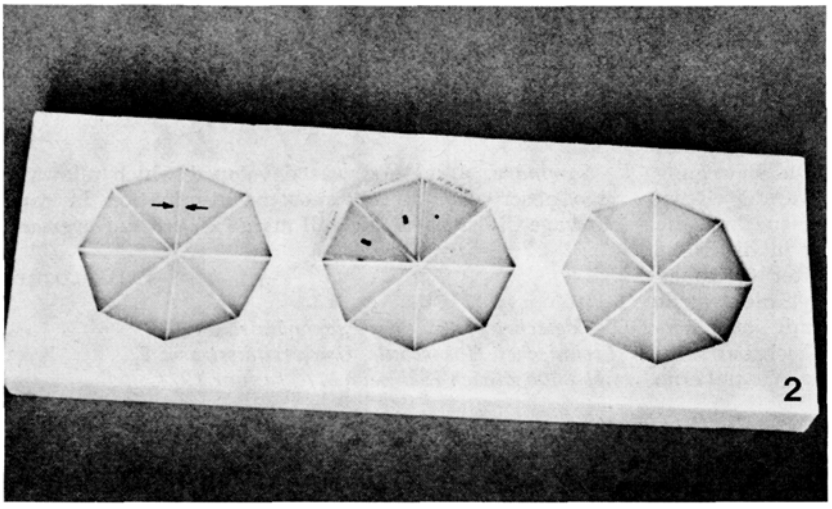

Fig. 2. Plastirack B. 'Pie'-like form with small bridges (arrows) for flat embedding; $^1/_2$ of original size.

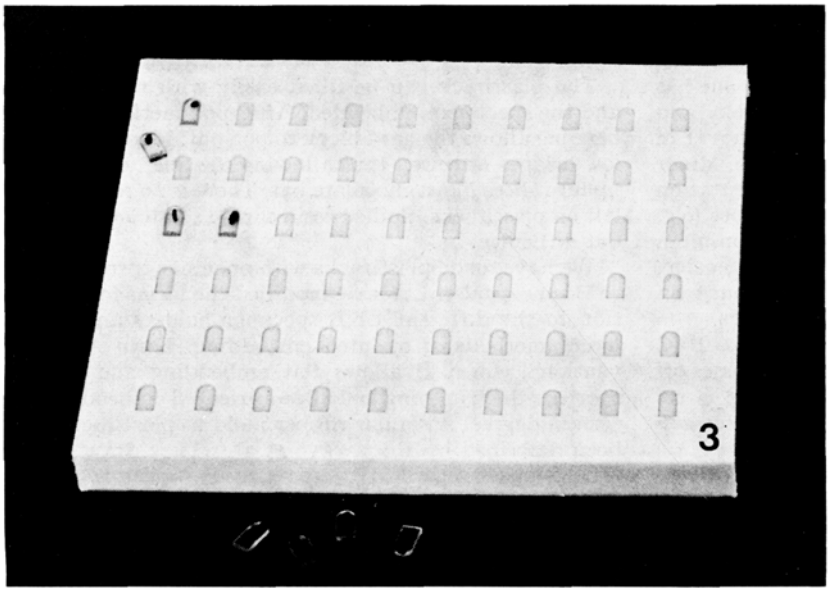

Fig. 3. Plastirack C. Modified form for LKB-specimen holder; $^1/_2$ of original size.

Vestopal, which does bind to the silicone rubber, each plastic can be used.

Plastiracks offer 3 advantages over the use of capsules: a) they cut the cost of embedding by eliminating capsules (and capsule holders); b) they facilitate the embedding procedure by shortening it and by elimination of razor blade injuries; c) they permit the desired orientation of the specimen.

Modified plastiracks have been used in our histology department. Preliminary results are encouraging since paraffin also does not bind to the silicone rubber used.

Zusammenfassung. Einbettungsformen aus Silikongummi wurden entwickelt mit dem Ziel, eine einfache, saubere und rasche Einbettung für eine grosse Zahl von Gewebsblöcken zu erreichen. Die Formen sind für Epon, Epon-Araldit und Maraglas, aber nicht für Vestopal verwendbar.

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A Simple Gas Liquid Chromatography Procedure for Determination of Cannabinoidic Acids in *Cannabis sativa* L.

A recent article by KIMURA and OKAMOTO[1] discussed the distribution of tetrahydrocannabinolic acid in fresh *Cannabis sativa* L. The method they employed for analysis of the plant material required heating the dry material at 110 °C for 15 min in order to convert tetrahydrocannabinolic acid (THCA) to tetrahydrocannabinol (THC). The sample was subsequently extracted and analyzed by gas chromatography. The THC content was assumed to be due mainly to THCA. KORTE[2], however, reports the extraction of the acids with hexane. This paper presents a simple method for determining THCA in *Cannabis sativa.*