



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

TENTO PROJEKT JE SPOLUFINANCOVÁN EVROPSKÝM SOCIÁLNÍM FONDĚM
A STÁTNÍM ROZPOČTEM ČESKÉ REPUBLIKY

Topic 06: Structure of lily anthers and ovary A. Paraffin embedding

Details of the structure of flower parts were often studied by means of paraffin sections. This method needs to prepare appropriate segments of flower parts, fixed them with fixative mixture, dehydrate and transfer them to paraffin. Ethanol or butanol series are used for material dehydration. Paraffin infiltration and embedding are last steps of this method.

Plant material: segments of the anthers and the pistils of lily (*Lilium* – Asian hybrid) embedded into paraffin

- Samples:**
- 301.1. Segments of the anther – flower bud 5 cm long
 - 301.2. Segments of the anther – flower bud 6 cm long
 - 301.3. Segments of the anther – flower bud 9 cm long
 - 301.4. Segments of the pistil (the stigma, the style, the ovary – flower bud 5 cm long)
 - 301.5. Segments of the pistil (the stigma, the style, the ovary – flower bud 6 cm long)
 - 301.6. Segments of the pistil (the stigma, the style, the ovary – flower bud 9 cm long)

Procedure:

1. Isolation of the anthers and the pistils from the flower bud, and their fixation in the FAA mixture (50% ethanol) for 88 hours.
2. Washing twice for 30 minutes in 50% ethanol, segmentation of the anthers and the pistils.
3. Butanol series dehydration according to the protocol.
4. Paraffin (Paraplast Plus®, temperature of melting 56°C) infiltration.
5. Paraffin embedding and formation of paraffin blocks with segments of plant organs.

Literature:

1. Pazourková, Z. (1982): Botanická mikrotechnika. 1. vyd. Praha: Univerzita Karlova, 166 s.
2. Kiernan, J. (1981): Histological and histochemical methods: Theory and practise. 1st Ed. Oxford: Pergamon Press, 344 s.
3. Lux, A., Erdelská, O. (1998): Praktikum z anatómie a embryológie rastlín. Bratislava: Univerzita Komenského, 135 s. ISBN 80-223-1229-0.