SUMMARY

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1. The anisotropic liquid of a binary mixture is a single homogeneous phase exhibiting birefringence.
2. Irrespective of the shape, size and structure of the admixed non-mesomorphic molecules, there exists a certain minimum area over which genuine mixed liquid crystals are formed.
3. The isotropic liquid - nematic liquid transition line stands as a measure of the tendency of the non-mesomorphic component towards mixed mesomorphism and group slope values have been deduced from the slopes of the transition lines of binary systems wherein the two components are similar in shape and structure.
4. The general order for the efficiency of the end groups towards mixed nematic mesomorphism remains the same for the binary systems, the components of which are similar in shape and structure, irrespective of the magnitudes of the group slope values.
5. For a binary mixture of chemically similar non-liquid crystalline substances to exhibit enantiotropic mixed mesomorphism over a range of temperature and concentration, the eutectic alongwith the mixed melting points of at least some compositions should fall below the mixed transition points of the crystalline liquid phase, which lie between the two latent transition temperatures of the pure components.

6. In mixtures of non-mesomorphic substances exhibiting enantiotropic mixed mesomorphism, the range over which mixed mesomorphism is exhibited should normally vary with the overall efficiency of the system.
7. Reliable extrapolation of the transition curve is possible only in such binary systems comprising components of similar shape and structure and wherein the course of the undetermined transition line could be traced by the exhibition of monotropic mesomorphism in the supercooled melt, over a reasonable distance.
8. Binary systems comprising monotropic constituents similar in shape and structure exhibit mixed mesomorphism throughout the melt which may be enantiotropic or monotropic.
9. In mixed polymesomorphism, the nematic phase region increases at the cost of the smectic phase as the concentration of the non-mesomorphic component increases. However, binary mixtures in which the first few compositions melt to isotropic liquid at a temperature higher than the mesomorphic - isotropic liquid temperature of the pure liquid crystalline component, then the mesomorphic - isotropic liquid transition curve exhibits a maximum and the mesomorphic phase becomes a purely smectic one.