

CHAPTER 5

CONCLUSIONS

The following conclusions can be drawn in brief from the study of etch phenomena on crystals investigated.:-

Etch attack on mica crystals by hydrofluoric acid and fused alkalis has shown that:

- (i) the cleavage lines displace on etching and the pits remained stationary. This is also true in case of etching of calcite.
- (ii) displacement of the cleavage lines could not be accurately correlated with the etch pit dimensions.
- (iii) the etch pits originate at impurity centres, which give rise to lattice distortion.
- (iv) Besides etching time, temperature is an important factor for deciding the rectilinearity or curvilinearity of an etch pit.

In case of calcite etched by a variety of etchants, it is found that:

- (i) the shapes of etch pits depend upon the etchants that were used, their concentrations, and the nature of any diluents used with them.
- (ii) Etch pits are shown to be at dislocation sites.
- (iii) mosaic structure of the crystal is suggested.