

**ION TRANSPORT MECHANISMS IN MIXED ALKALI GLASS**

A PROJECT REPORT PRESENTED BY

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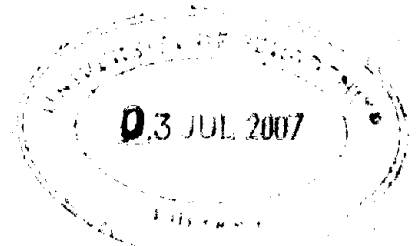
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# ION TRANSPORT MECHANISMS IN MIXED ALKALI GLASS

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Mixed alkali glasses were prepared using the binary  $x\text{KPO}_3 \cdot (1-x)\text{NaPO}_3$  system to study the various parameters related to the mixed alkali effect. Glass samples were prepared by melt quenching method and the electrical conductivity at various temperatures was measured by complex impedance technique. The conductivity Arrhenius plots were used to determine the pre-exponential factor and activation energy of various compositions. The variation of electrical properties were compared with the values of similar mixed alkali glasses to identify the similarity and differences for determining factors governing the mixed alkali effect. The ionic migration mechanisms proposed in the literature were reviewed and compared with the results of the present work.