

APPENDIX

CAI for teaching Titration :

Titration is one of the experiments to be carried out by the pre university students in Chemistry. Aim of this experiment is to estimate the volume of acid required to bring an end to the reaction with an alkaline or Vice-Versa. This experiment can be carried out using different combinations of acid and alkaline material. In this package, we simulate the whole titration process starting from taking the acid into a burette, taking alkaline in the conical flask, adding acid from burette to alkaline in conical flask and identifying the end point. We provided facilities like controlling the cock using up and down arrow keys and controlling shaking of conical flask using left and right arrow keys. Our aim in developing this package is to provide sufficient knowledge to students before performing the actual experiment. This simulation helps in providing hands-on practice to the student and in building up confidence. Enhanced understanding obtained by this package contributes in reducing the wastage of chemicals in laboratory.

We refer to the details on Titration experiment of Chemistry which is used in volumetric analysis, from the book EXPERIMENTAL CHEMISTRY FOR CLASS XI by S.C.Jain, G. Balasubramanian and R. K. Sethi.

We have provided different facilities to simulate Titration experiment in this package. Figures A.1 to A.4 are the sample screens, when titration experiment is simulated.

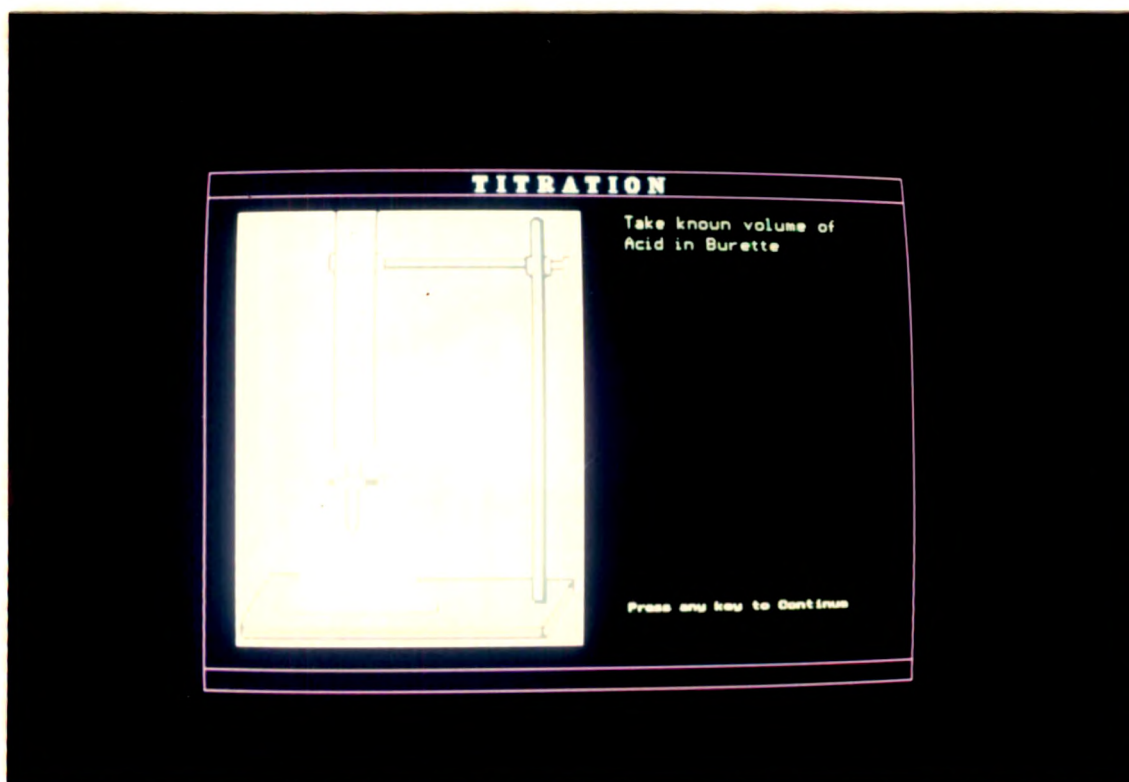


Fig. A.1. Setup of Titration Experiment (of Chemistry).

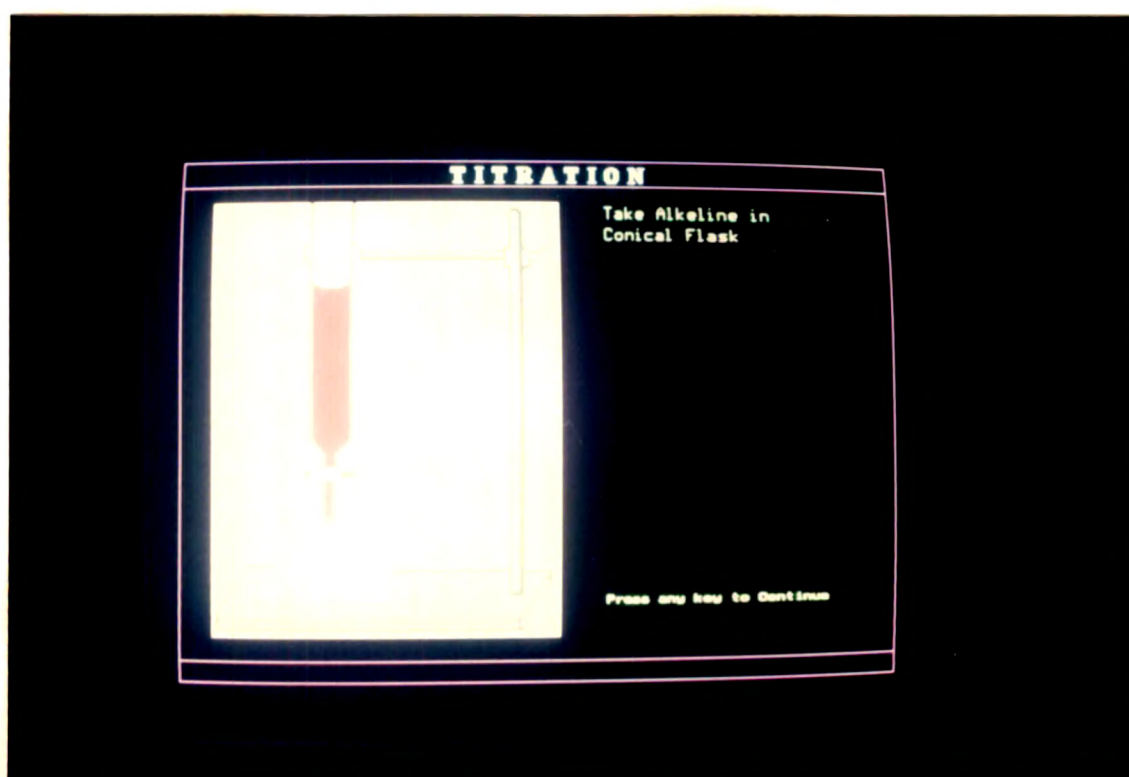


Fig. A.2. Burette contains known volume of Acid.

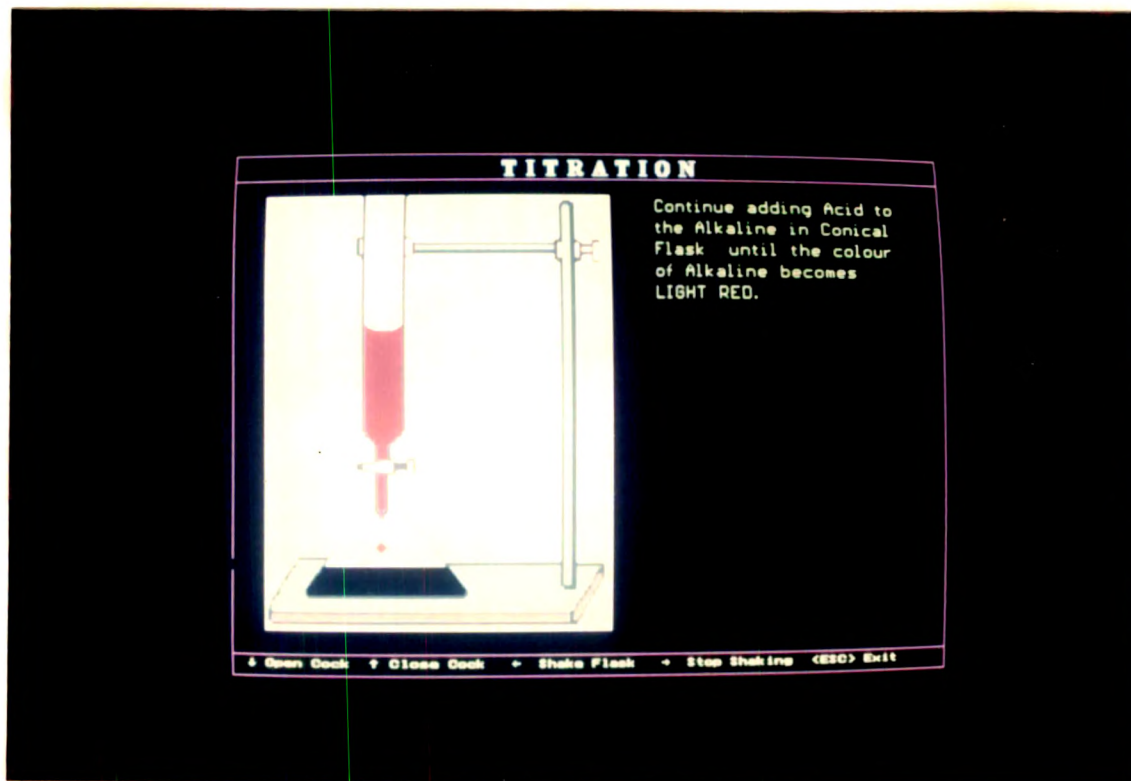


Fig. A.3. Adding acid to Alkaline.

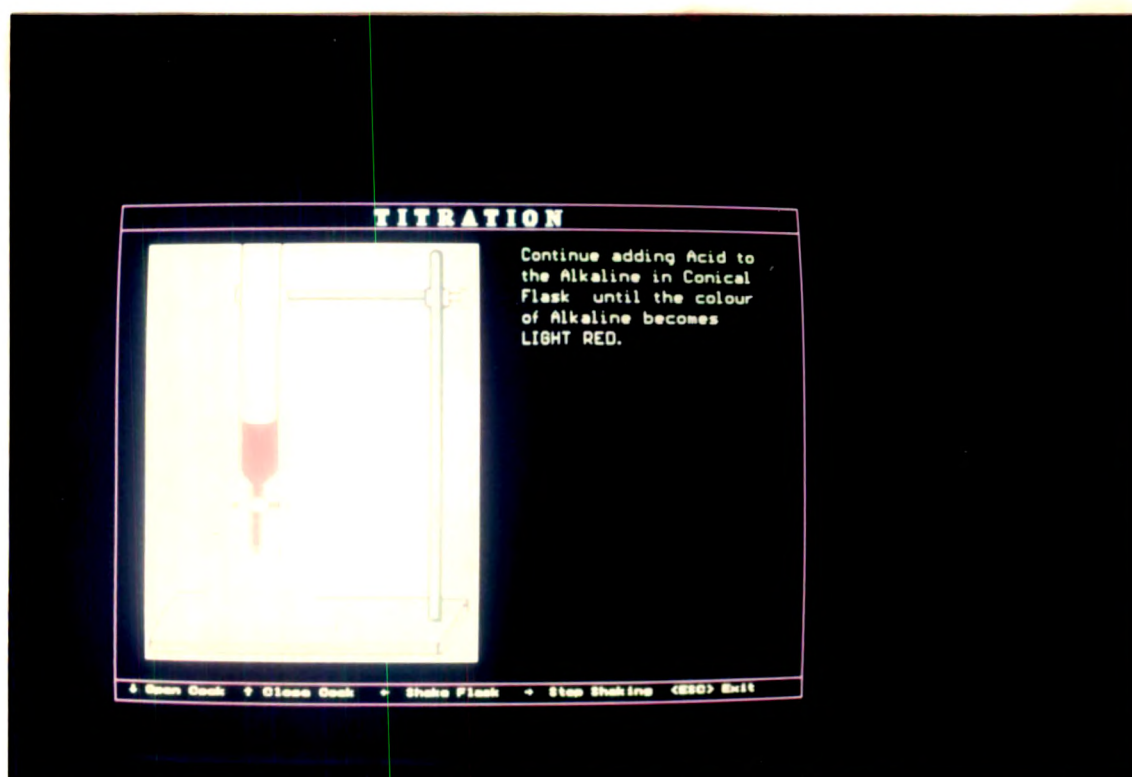


Fig. A.4. Titration Successful.