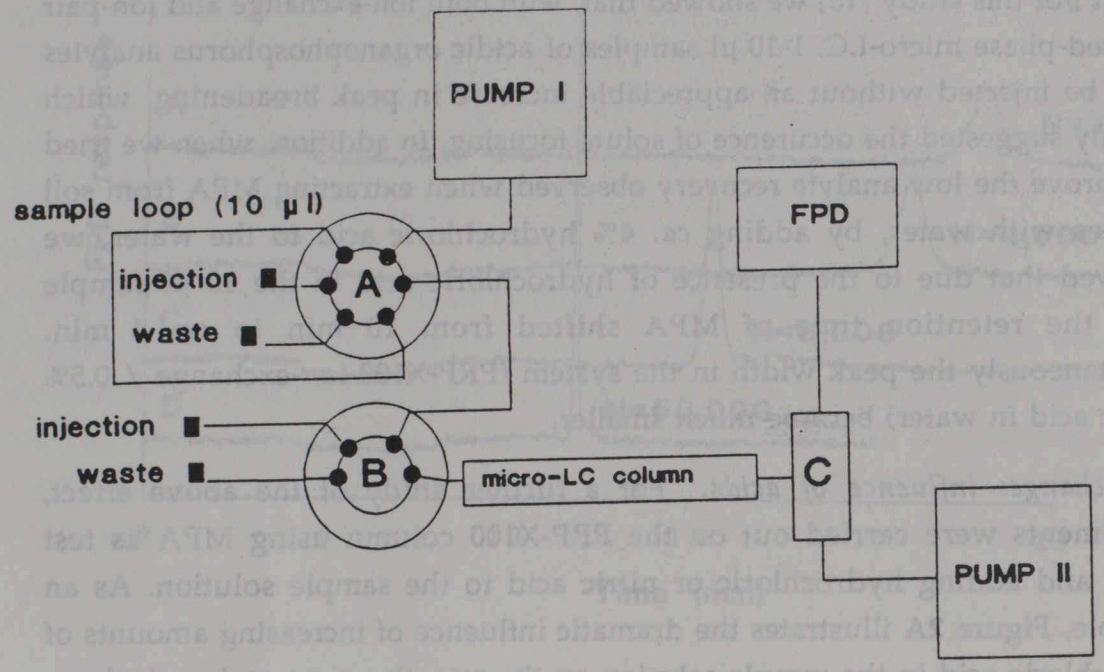

Fig. 1. Experimental set-up of the total analytical system: A, injection valve with 10 µl sample loop; B, injection valve with internal 60 nl loop; C, interface.

mass-flux of an analyte. That is, the use of a make-up flow does not reduce sensitivity.

Results and Discussion

Large-Volume Injections and Peak Compression

The inherently low injection volumes of micro-LC (ca. 60 nl) often make the sensitivity of the system expressed in terms of injected concentrations unacceptably low. In this context, as an alternative to on-line preconcentration via a precolumn [6, 10], direct injection of relatively large volumes under column focusing conditions should be considered. The well-known principle of column focusing - *i.e.* trapping analytes dissolved in a non-eluting solvent on the top of the analytical column - to enhance the concentration sensitivity in micro-LC has recently been recommended in several papers [11-14].