Flow injection (FI) has been known with features of a simple operational basis, using inexpensive hardware, straightforward thus leading to convenient operation, high sample throughput, cost effective performance and versatility. FI has been widely used as an analytical tool and also combined with the other analytical techniques [1]. Neophytes in the technique were delighted in including in the FI manifold multiple confluence points and valves, thus demonstrating the possibility of materializing any design, solving almost all problems related with liquid sample handling and showing their imagination for these tasks.

The role of valves in constructing the FI manifold more appropriate for each method is unquestionable, so it is time to give to both new and experienced practitioners an overview of the multiple functions of these devices, by starting with simple injection valves used for either sample or reagent insertion without forgetting other of their very useful functions as housing different units [2].

Agilent HPLC system was modified for determining of Ni(II) ions by modified FIA system. To compose of FIA system, two valves were adapted to this system. In the experiments, it was studied at pH 4 and was prepared metal solutions in different concentrations (1.10^{-4}-1.10^{-2} \text{ mol.L}^{-1}). 0,1 M EDTA solution at pH 8 was used as carrier phase and metal solutions were injected into carrier phase. By means of dispersion of sample in carrier phase, it was observed of behaviour of Ni(II) ions with UV dedector (595 nm) at 0,5 mL/min flow rate and 30º C.

To calculate the Ni(II) content, the calibration curve was plotted by using standard metal solution at definite concentration on account of Ni(II) ions and then undefined metal content was found by aid of calibration curve.

References