Fluoxetine is one of the Selective Serotonin Reuptake Inhibitors (SSRI) representative, first choice medicines in modern antidepressant therapy. Despite being safer with regard to classic antidepressants, many authors defend the necessity of monitoring their plasma levels in particular circumstances, because of the great interindividual variability in their effects. A sensitive and fast method has been developed applying LC-MS technology which allows the determination of Fluoxetine and its main active metabolite Norfluoxetine, in plasma as well as in saliva, in 10 minutes, after carrying out a simple liquid-liquid extraction.

**Keywords**
Fluoxetine, Norfluoxetine, liquid chromatography, mass spectrometry