

Optimization of SPE method for the extraction of 12 neurotransmitters from sheep brain

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Abstract. The present paper presents our attempts concerning the development of an extraction method for catecholamines. In order to achieve the extraction of all the selected solutes using a single SPE cartridge, several types of support were tested, among them: cation exchange supports, hydrophilic-lipophilic supports, C18 supports and PGC supports. As unfortunately none of the supports tested offered us the possibility of carrying out the extraction of 12 catecholamines from our standard mixture, we chose to use a coupling of two different cartridges: Oasis HLB and PGC which together ensure the extraction of all the compounds of the mixture with good extraction yields and with simple protocols. The selected cartridges were successfully tested for the extraction of a sample spiked from sheep brain with the 12 catecholamines in our mixture. The SPE method that we have developed allows the purification of the samples (a significant part of the components of the matrix is eliminated during this step) and also a preconcentration of the samples.

Keywords: Catecholamine; Oasis HLB; PGC; SPE; Sheep brain extract.

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