

# Phosphoinositide Analysis using the HPLC System Equipped with a Fraction Collector and the TSKgel SAX Column

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## **Abstract**

Phosphoinositides (PIs) are minor components of phospholipids involved in numerous cell functions, such as cytoskeletal reorganization, ion channel and transporter regulation, chromatin remodeling, membrane trafficking and the recruitment of signaling molecules. Due to their low abundance and rapid turnover rate in cells, it is difficult to quantify the cellular contents. Radiolabeling methods using [<sup>3</sup>H]inositol and the HPLC system equipped with a flow scintillation analyzer and partisphere SAX column (Whatman) are usually employed for this purpose. In this technical review, we describe a simple and economical method for detecting cellular PIs using [<sup>3</sup>H]inositol labeling and the HPLC system equipped with a fraction collector (DC-1500C, Waters) and the TSKgel SAX column (Tosoh). This method is useful for quantifying the cellular contents of the PIs and can be applied in screening for inhibitors of PI kinases and phosphatases.

**Key words:** Phosphoinositides, [<sup>3</sup>H]inositol, HPLC, PI kinase