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Title (English)

Development and evaluation of procedures and reagents for extraction of proteins from dried blood spots for analysis using Proseek

Title (Swedish)

Abstract

A method for extraction of proteins from dried blood spots (DBS) for analysis using Proseek is developed and evaluated. DBS, as sample format, possesses a number of desirable advantages over for example plasma samples. These advantages include for example minimal patient invasiveness, sampling simplicity and non regulated sample transportation. Highly reproducible quantitative detection of 92 proteins is demonstrated from a 1.2 mm in diameter DBS disk. The DBS inter spot analysis precision (7% coefficient of variance) is comparable to plasma inter assay precision (6% coefficient of variance). Coefficient of variance is the ratio between standard deviation to mean value for the analysed replicates. Proseek analysis of DBS could possibly reveal a unique opportunity to examine health related issues in extremely premature infants hopefully resulting in increased survival rates in the future.

Keywords

DBS, dried blood spots, PEA, Proseek, Proseek Multiplex, qPCR, Protein detection, Olink

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