

## **Abstract**

Electroosmotic flow plays a crucial role in capillary electrophoresis, as it can impact both the resolution and duration of the separation process. Altering the electroosmotic flow can be achieved through dynamic coating of the inner capillary surface. The primary objective of this work was to investigate the potential of various positively charged anchors in providing a suitable dynamic coating for capillary electrophoresis. At first, experiments were carried out with neopentyl anchors PK 1291, PK 941, PK 1300 and PK 1294 using four different coating methods. Obtained coatings demonstrated the ability to suppress the electroosmotic flow, although the stability of the obtained coatings varied significantly among the individual anchors. PK 941 demonstrated the most promising results within this group. Subsequently, measurements were also performed using the cyclodextrin anchor PK 1281, which yielded the most favorable outcomes. It was observed that depending on the background electrolyte and the chosen coating method, this anchor could either reverse the direction of the electroosmotic flow or nearly completely eliminate it.

**Key words:** capillary electrophoresis, electroosmotic flow, dynamic capillary coating, positively charged anchors.