



GE Healthcare Life Sciences provides products and services used as tools for biopharmaceutical manufacturing, drug discovery and the latest in cellular technologies, thereby enabling our customers around the world to be more productive, effective and innovative.

Master thesis work will be for spring 2020. Deadline for application is 15<sup>th</sup> November 2019.

### **Master thesis - Synthesize and application testing of alternative molecular weight marker used in gel filtration**

GE Healthcare Life Sciences work with a wide range of products for both lab- and bioprocess scale. The product portfolio for the Resins department ranges from sample preparation kits to resins and pre- packed columns for purification of biomolecules. These columns must be thoroughly quality tested before reaching the customers to assure product quality. The customers regularly also test the optimal performance of their columns by using calibrations kits and markers.

New alternatives to current markers used for gel filtration techniques are needed. These markers are used as molecular weight markers for calibration curves both externally by costumers and internally as a QC standard. In addition, markers of void volumes are used in certain methods and in QC release of gel filtration columns.

#### **Project:**

This master thesis work includes investigation of alternative products suitable for defining gel filtration column properties. More specifically, evaluate available and/or synthesize novel markers of column void volumes and investigate their performance in comparison currently used marker(s). Techniques used in this work will be organic chemistry, gel filtration and other chromatography techniques.

The project requires experience in organic chemistry, interest and enthusiasm for application/analytical chemistry and a systematic and analytic mindset. GE Healthcare contributes with outstanding supervision and world-class instrumentation.

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