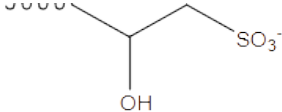
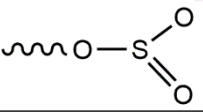


6 Appendix A. Supplementary data.

Table S1: List of the tested ligands of the membrane adsorber and columns.

Name	Structure	Ligand	Source	Bed volume [mL]
Membrane adsorber				
IEX	Sartobind® S75		strong cation exchanger (sulfonic acid)	Sartorius Germany AG, 2.1
MMC	Prototype B	not available	weak cation exchanger with various hydrophobic groups	Sartorius Germany AG, 1
MMC	Prototype C	not available	weak cation exchanger with various hydrophobic groups, more hydrophobic than Prototype B	Sartorius Germany AG, 1
MMC	Prototype D	not available	weak cation exchanger with various hydrophobic groups, more hydrophobic than Prototype C	Sartorius Germany AG, 1
MMC	Prototype E	not available	weak cation exchanger with various hydrophobic groups, more hydrophobic than Prototype D	Sartorius Germany AG, 1
MMC	SUCA		sulphated cellulose	Sartorius Germany AG, 3
Column				

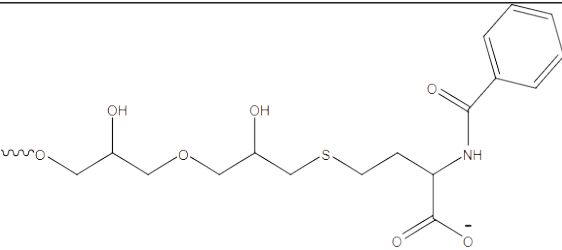
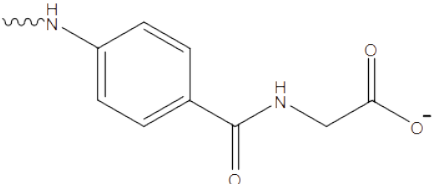
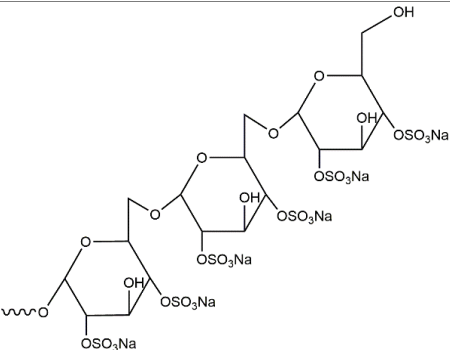
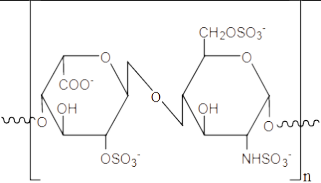
MMC	HiTrap™ Capto™ MMC		weak cation exchanger (carboxyl group), primary amine, thioether, phenyl group	GE Healthcare Life Sciences, USA	1
MMC	HiTrap™ Nuvia™ cPrime™		weak cation exchanger (carboxyl group), primary amine, phenyl group	Bio-Rad Laboratories, USA	1
MMC	Capto™ DeVirS		dextran sulphate	GE Healthcare Life Sciences, USA	4,7
Affinity chromato- graphy	HiTrap™ Heparin HP		Heparin (sulphate, carboxyl, and hydroxyl groups)	GE healthcare, USA	1

Table S2: Summarized results of the alternative methods as capture step in the purification process of hFGF-2.

	Purity	Yield	Recovery
Membrane adsorber			
Sartobind S75	55	40	90
Prototype B	58	35	78
Prototype C	40	36	54
Prototype D	56	45	77
Prototype E	55	41	68
SUCA	60	41	78
Column			
HiTrap™ Capto™ MMC	45	28	59
Foresight™ Nuvia™ cPrime™	51	29	75
Capto™ DeVirS	60	73	82
HiTrap™ Heparin HP	86	52	82

Table S3: Summarized results of the alternative methods as intermediate step in the purification process of hFGF-2 after CEX as capture step.

	Purity	Yield	Recovery
Membrane adsorber			
Prototype B	60	79	79
Prototype C	57	86	86
Prototype D	64	88	88
Prototype E	60	93	93
SUCA	70	76	76
Column			
HiTrap TM Capto TM MMC	90	85	85
Foresight TM Nuvia TM cPrime TM	90	85	85
Capto TM DeVirS	70	95	95
HiTrap TM Heparin HP	94	89	89