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APPENDIX

Appendix 1. Concentration vs. Absorbance BSA protein standard

Concentration	Absorbance
0	0.000
125	0.418
250	0.496
500	0.925
1000	1.172
2000	2.390

Appendix 2. Absorbance of keratin sample for BCA assay.

Keratin Sample	
Absorbance 1	1.4626
Absorbance 2	1.4978
Average	1.4802

Appendix 3. Swelling index 2% hydrogels values. All values are presented as mean \pm SD

Groups	Swelling Index 2%		
	1 mins	10 mins	100 mins
CP	279.56% \pm 84.29%	385.66% \pm 68.14%	1149.24% \pm 66.58%
PO	228.30% \pm 53.33%	548.89% \pm 59.82%	906.54% \pm 66.16%
KP 1:4	228.29% \pm 64.78%	680.72% \pm 247.00%	1218.00% \pm 101.34%
KP 4:1	289.68% \pm 211.01%	917.83% \pm 405.78%	879.66% \pm 103.33%
KP 1:1	337.41% \pm 51.39%	545.49% \pm 99.19%	1374.40% \pm 161.63%

Appendix 4. Swelling index 4% hydrogels values. All values are presented as mean \pm SD

Groups	Swelling Index 4%		
	1 mins	10 mins	100 mins
CP	295.74% \pm 25.63%	556.70% \pm 9.61%	753.73% \pm 31.54%
PO	377.79% \pm 48.69%	589.19% \pm 110.54%	804.70% \pm 77.63%
KP 1:4	560.70% \pm 9.90%	811.29% \pm 239.89%	1361.13% \pm 49.54%
KP 4:1	834.45% \pm 47.98%	1035.56% \pm 197.83%	1395.40% \pm 263.04%
KP 1:1	280.55% \pm 204.34%	924.39% \pm 190.45%	1256.91% \pm 128.60%

Appendix 4. Erosion index 2% hydrogels values. All values are presented as mean \pm SD

Groups	Swelling Index 4%		
	1 mins	10 mins	100 mins
CP	295.74% \pm 25.63%	556.70% \pm 9.61%	753.73% \pm 31.54%
PO	377.79% \pm 48.69%	589.19% \pm 110.54%	804.70% \pm 77.63%
KP 1:4	560.70% \pm 9.90%	811.29% \pm 239.89%	1361.13% \pm 49.54%
KP 4:1	834.45% \pm 47.98%	1035.56% \pm 197.83%	1395.40% \pm 263.04%
KP 1:1	280.55% \pm 204.34%	924.39% \pm 190.45%	1256.91% \pm 128.60%

Appendix 5. Erosion index 2% hydrogels values. All values are presented as mean \pm SD

Groups	Erosion Index 2%		
	1 mins	10 mins	100 mins
CP	27.46% \pm 20.06%	25.99% \pm 3.29%	50.47% \pm 6.58%
PO	49.82% \pm 10.15%	57.77% \pm 9.05%	57.01% \pm 12.16%
KP 1:4	19.56% \pm 13.00%	71.85% \pm 30.31%	42.40% \pm 3.91%
KP 4:1	73.81% \pm 2.06%	40.48% \pm 14.43%	35.26% \pm 8.45%
KP 1:1	60.06% \pm 7.05%	21.44% \pm 20.26%	40.39% \pm 0.68%

Appendix 6. Erosion index 4% hydrogels values. All values are presented as mean \pm SD

Groups	Erosion Index 4%		
	1 mins	10 mins	100 mins
CP	27.57% \pm 8.95%	65.66% \pm 32.74%	77.87% \pm 17.68%
PO	18.22% \pm 5.19%	48.68% \pm 3.44%	39.31% \pm 5.58%
KP 1:4	52.08% \pm 50.13%	58.53% \pm 54.00%	48.12% \pm 14.05%
KP 4:1	36.00% \pm 55.57%	20.01% \pm 14.71%	32.25% \pm 41.13%
KP 1:1	18.43% \pm 2.66%	40.02% \pm 5.40%	25.76% \pm 5.71%