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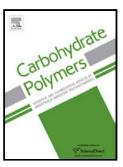
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ACCEPTED MANUSCRIPT

1	Phase diagrams of hybrid carrageenans extracted from Ahnfeltiopsis devoniensis and
2	Chondrus crispus
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4	M.D. Torres ^{a,b} , G. Azevedo ^a , L. Hilliou ^a
5	
6	KI aggregates show less tendency to phase separate from the liquid matrix than K+I aggregates
7	Gel formation occurs at smaller concentrations and ionic strengths for KI possessing larger fraction of K
8	Below 50 mol% of K, KI gels show different structure and elasticity
9	Large deformation behavior of KI gels does not depend on the KI chemical structure
10	
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16	
17	Abstract
18	NaCl and KCl phase diagrams of two kappa/iota-hybrid carrageenans (KI) are established, and the
19	rheological properties of obtained solutions and gels are reported. KI were extracted from
20	Ahnfeltiopsis devoniensis and Chondrus crispus seaweeds and showed different chemical
21	composition, 48 mol% of kappa carrageenan (K) and 52 mol% of iota carrageenan (I), and 78 mol%
22	of K and 22 mol% of I, respectively. Phase diagrams are systematically compared those of blends of
23	commercial K and I (K+I) showing equivalent chemical compositions. Results confirm that KI
24	clearly differ from mixtures of K and I. K+I form gels at lower polysaccharide concentration and
25	ionic strength, and exhibit gel separation from a liquid phase when large amount (>0.1 mol/L) of
26	KCl is used. In contrast, no syneresis was found in KI gels formed under similar conditions. Both KI
27	and K+I gels are strain hardening, and show a concentration scaling of the elasticity with exponents
28	ranging from 1.1 to 3.2 depending on the type of salt and ionic strength. The strain at break of KI

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