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SUPPLEMENTARY INFORMATION

Adsorption behavior of gluten hydrolysate on mild steel in 1M HCl and its role as a green corrosion inhibitor

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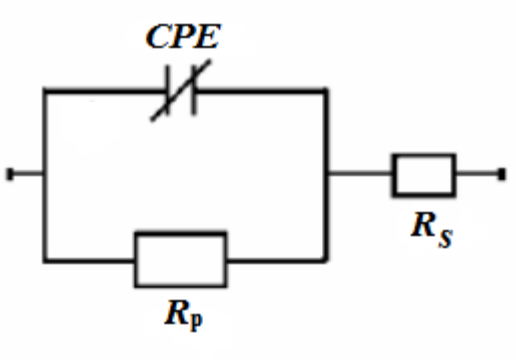

Fig. S1 Equivalent circuit model used to fit the impedance spectra.

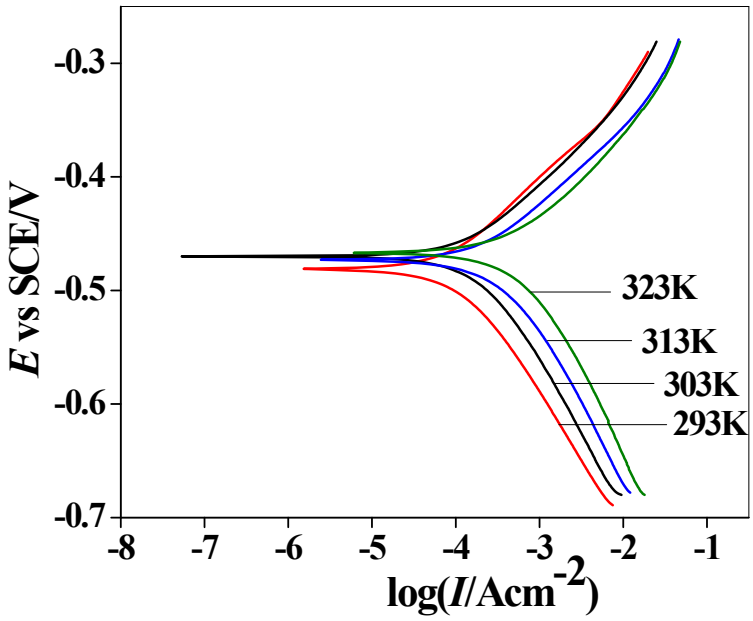

Fig. S2 Potentiodynamic polarization curves for mild steel in 1 M HCl in presence of 500 ppm gluten hydrolysate at different temperatures.

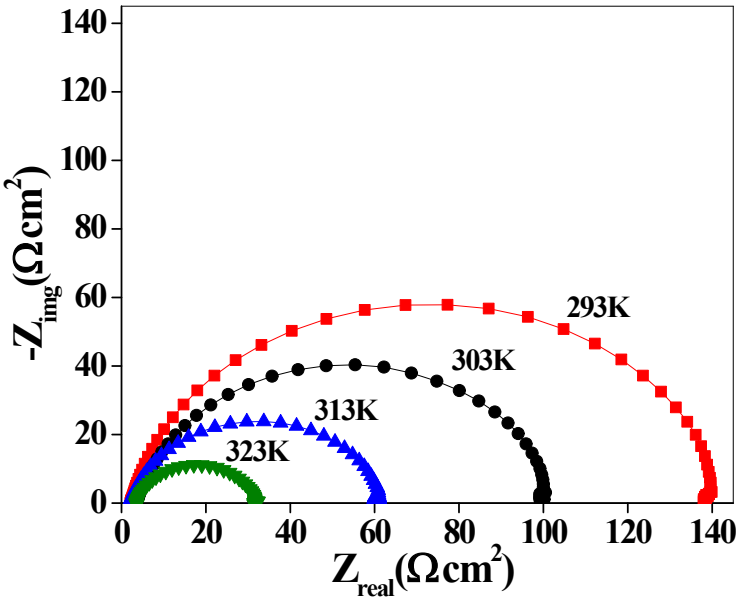

Fig. S3 Nyquist plots for mild steel in 1 M HCl in presence of 500 ppm gluten hydrolysate at different temperatures.

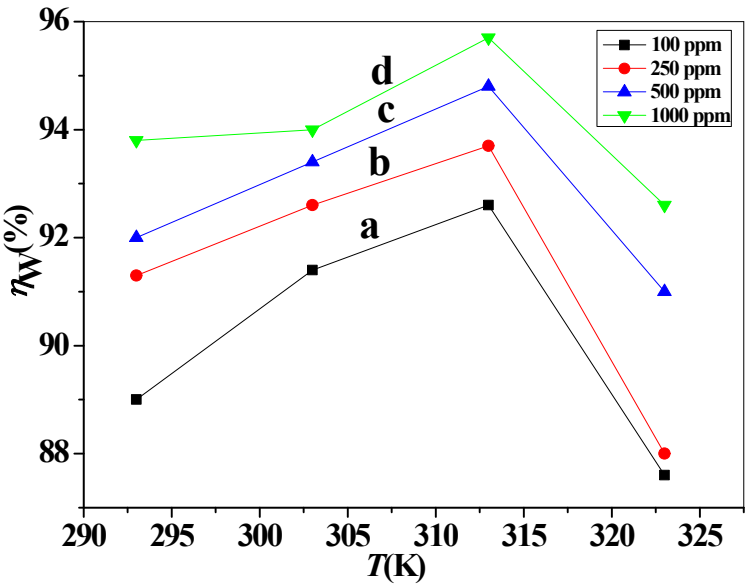

Fig. S4 Variation of inhibition efficiency (from weight loss method) of gluten hydrolysate with temperature towards corrosion of mild steel in 1M HCl.

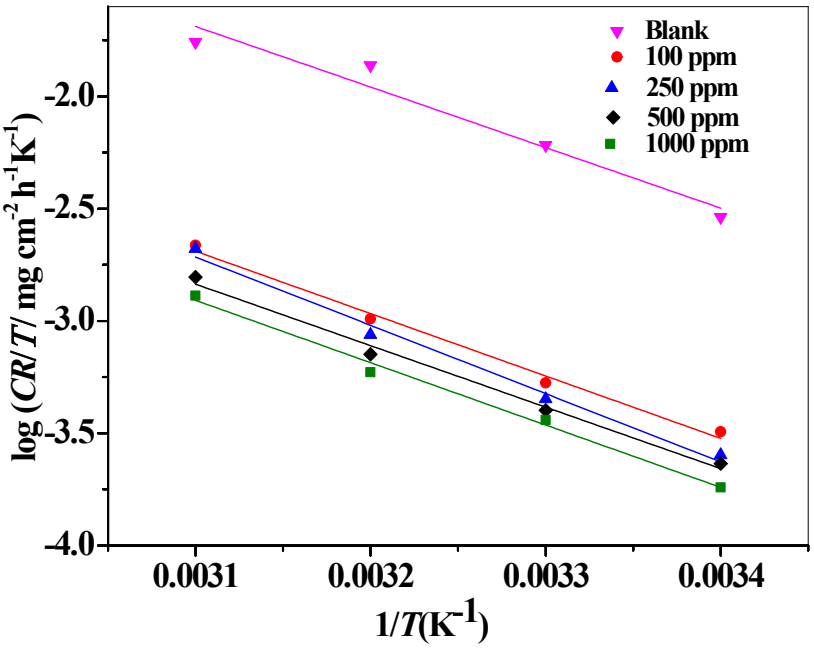

Fig. S5 Arrhenius plots of log (*CR*/*T*) vs. 1/*T* for mild steel in 1 M HCl without and with different concentrations of gluten hydrolysate.

Table S1 Corrosion parameters from weight loss measurement for mild steel at different immersion time in 1M HCl.

Temperature (K)	Inhibitor conc. (ppm)	Time (Hour)	CR ((mg cm^{-2} h^{-1})	Inhibition efficiency $\eta_W(\%)$
303	BLANK	2	2.5	
		5	1.9	
		24	1.263	
		48	0.785	
		72	0.36	
	250	2	0.23	90.8
		5	0.19	90
		24	0.12	90.5
		48	0.11	85.9
		72	0.103	71.3
	1000	2	0.175	93
		5	0.148	92.2
		24	0.093	92.6
		48	0.073	90.6
		72	0.0727	79.8