

Supporting information

Ionogel Impregnated Glass Ionomer Cement and the Effect of Nanoparticle Additives

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Estimation of monomers.

The presence of residual monomers in the polyalkenoic acid formulation was confirmed and estimated using HPLC method. The HPLC analysis was conducted using a mobile phase of acetonitrile (90%) and 0.1% phosphoric acid (10%) at a flow rate of 0.6 ml/min.

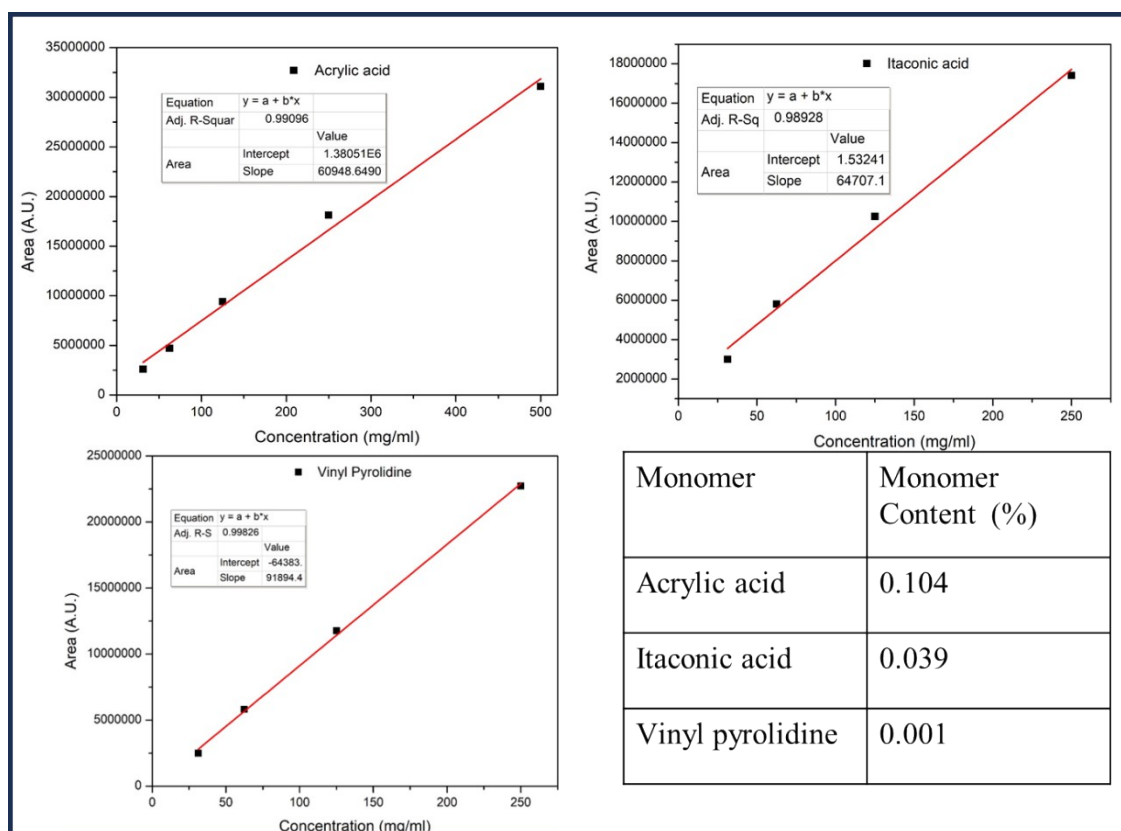


Figure S1: The calibration curve and residual monomer content in poly (AA-co-IA-co-VP) formulation (The residual monomer content was less than 1%).

Fusing mixture Composition

Table T1: Composition of the glass powder

Name of the chemical constituent	Weight (g)
Quartz	17.4930
Aluminum Oxide	9.9743
Aluminum fluoride trihydrate	3.1889
Aluminum phosphate	6.0003
Strontium fluoride	20.7030
Sodium hexafluoroaluminate	3.0012

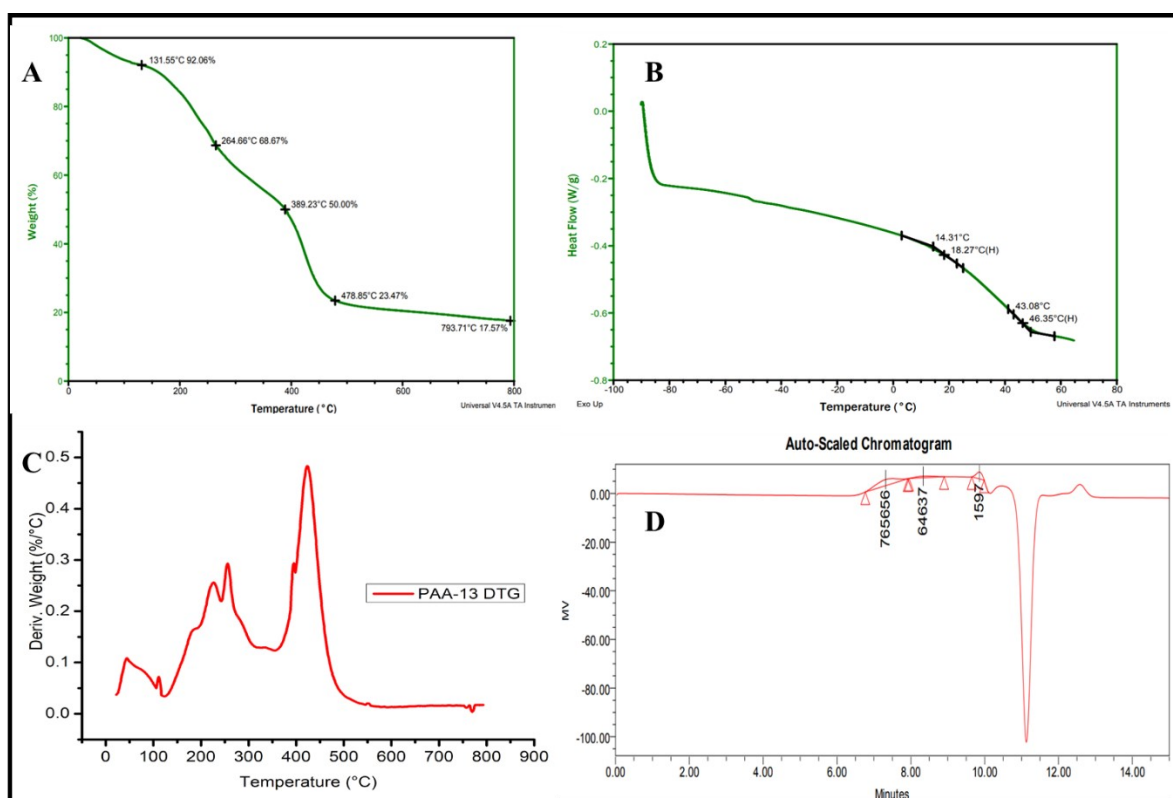


Figure S2: (A) Molecular weight (Mw) of synthesized poly (AA-co-IA-co-VP) (B) TGA curve of poly (AA-co-IA-co-VP) (C) DTG of poly (AA-co-IA-co-VP) (D) DSC Curve showing Tg of poly (AA-co-IA-co-VP)

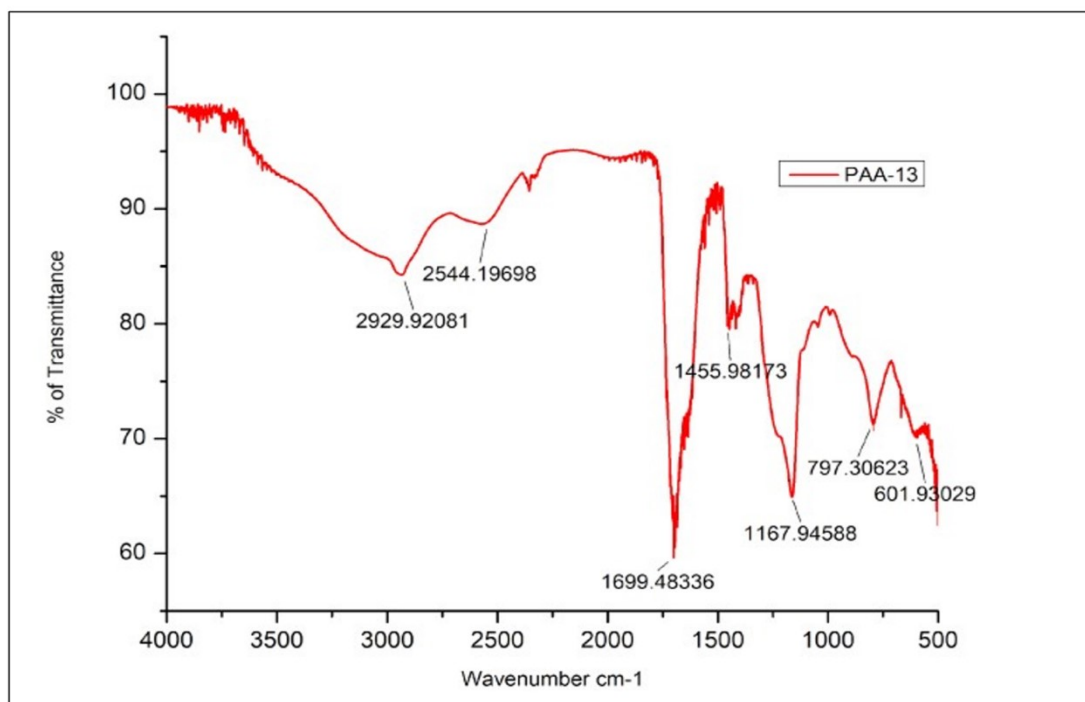


Figure S3: FTIR Spectra of poly (AA-co-IA-co-VP)

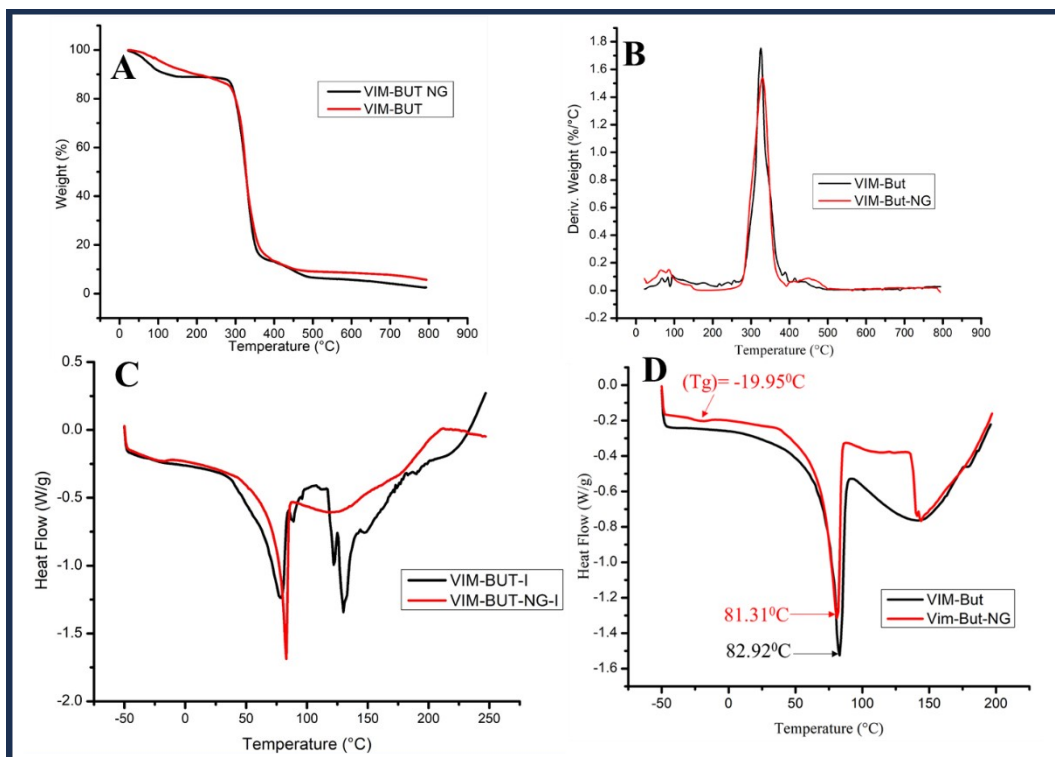


Figure S4: Comparison of thermal properties of ionogel and monomer (A) TGA of monomer and ionogel (B) DTG of ionogel and monomer (C) First heat of ionogel and monomer (D) Second heat of nanogel and monomer

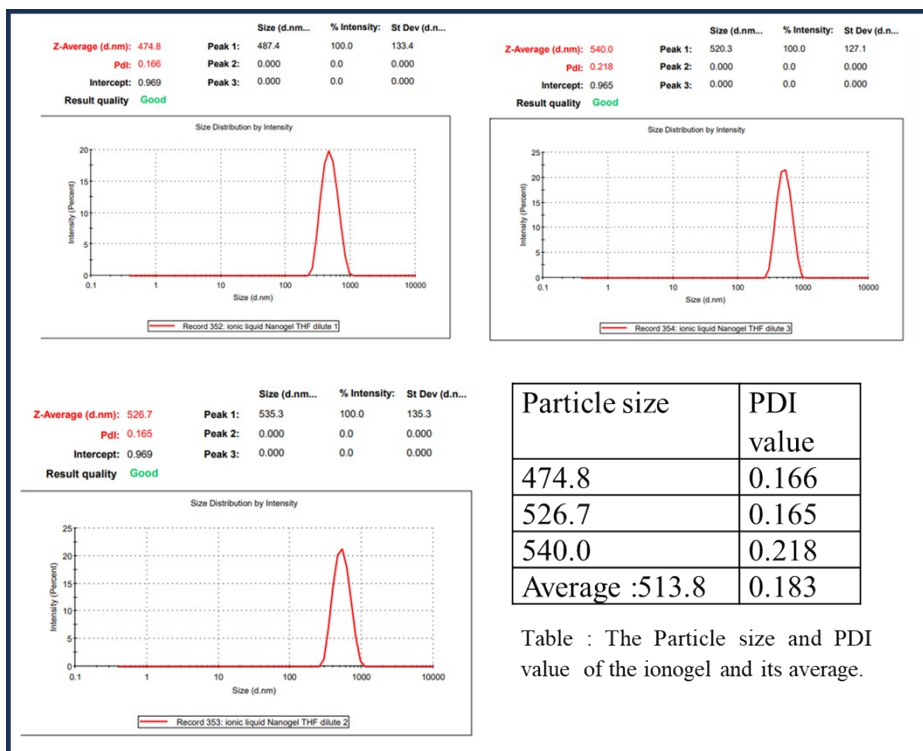


Figure S5: The particle size of the ionogel measured using dynamic light scattering

Clinical Observation Table

Experimental design. I

Details	Extraction media : Physiological saline	
	Test	Control
No. of animals	5	5
Name of species	Mice	
Name of strain	Swiss albino	
Sex of the animal	Male/Female	
Body weight	17-23	
Route of the injection	Intravenous	
Dosage of the injection	50mL/kg	

Table: T2: The physiological saline extract of the test material was injected to the mice and the animals were observed immediately after injection and at 4h, 24h, 48h, and 72h for the evidence of any abnormalities, loss in body weight or death. The data was collated in the table.

Motor	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Convulsion	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Reflexes	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Ocular signs	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Cardio vascular signs	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Salivation	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Piloerection	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Analgesia	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Muscle tone	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Gastrointestinal	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Skin	Imm./4h	N	N	N	N	N	N	N	N	N	N
	24h	N	N	N	N	N	N	N	N	N	N
	48h	N	N	N	N	N	N	N	N	N	N
	72h	N	N	N	N	N	N	N	N	N	N
Body weight	Final	22.25	23.05	22.9	25.05	24.15	23.95	24.15	23.8	24.85	23.5

