

## Reviewer 1 Report

Manuscript title: Sea Moss (*Eucheuma cottonii*) Extract as a Natural X-ray Contrast Candidate: Experimental Evaluation of Image Quality, Physicochemical Behavior, and Sensory Acceptability

Version: 1

### Comments:

1. Add chemical characterization of the radiopaque component and report attenuating element content per formulation to support the radiopacity mechanism.
2. Justify the carrier base choice and discuss how the base may influence attenuation and viscosity independent of sea moss concentration.
3. Define the exposure-selection rule a priori or analyze all planned exposures instead of selecting the strongest image after acquisition.
4. Include objective image metrics (ROI signal values, CNR/SNR) alongside subjective rater scores.
5. State rater blinding, viewing conditions, and viewing order randomization to reduce expectation bias.
6. Report the post hoc method after ANOVA, add effect sizes, and include confidence intervals where feasible.
7. Strengthen viscosity reporting using at least one standard rheology measure relevant to oral contrast performance.
8. Expand the safety pathway with a clear plan for toxicity screening and aspiration-risk assessment before any clinical translation.

Overall recommendation: Accept with minor revisions.

## Reviewer 2 Report

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Version: 1

### Comments:

The concept is promising, yet the manuscript needs tighter reproducibility so the formulation process can be replicated. The methods section needs explicit mixing and filtration endpoints, a statement on how homogeneity was verified, and details on batch consistency, since these factors can change both radiographic appearance and flow properties. The imaging component needs stronger controls, including fixed acquisition parameters, an a priori image-selection rule, and objective quantification to sit beside rater scoring, plus explicit confirmation of rater blinding and randomized viewing order. The sensory results support feasibility but require cautious framing due to the small panel size, so standardized tasting conditions and clear wording on preliminary scope are necessary. The conclusion should stay bounded to in vitro feasibility and position clinical utility as dependent on chemical characterization, rheology, and safety testing.

Overall recommendation: Accept with minor revisions.

## Reviewer 1 Report

Manuscript title: Sea Moss (*Eucheuma cottonii*) Extract as a Natural X-ray Contrast Candidate: Experimental Evaluation of Image Quality, Physicochemical Behavior, and Sensory Acceptability

Version: 2

### Comments:

The manuscript is now in shape for publication, having met the revision requirements.

## Reviewer 2 Report

Manuscript title: Sea Moss (*Eucheuma cottonii*) Extract as a Natural X-ray Contrast Candidate: Experimental Evaluation of Image Quality, Physicochemical Behavior, and Sensory Acceptability

Version: 2

### Comments:

Following the substantial completion of revisions, the manuscript is recommended for publication.