

INPLASY

Sensory evaluation of seaweed - a scoping review of the literature

INPLASY202410098

doi: 10.37766/inplasy2024.1.0098

Received: 23 January 2024

Published: 23 January 2024

Dahlstedt, S¹; Trigo, JP²; Undeland, I³; Pavia, H⁴; Stedt, K⁵; Sandvik, P⁶.

Corresponding author:

Sermin Dahlstedt

sermin.dahlstedt@ikv.uu.se

Author Affiliation:

Uppsala University.

ADMINISTRATIVE INFORMATION

Support - Formas.

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202410098

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 January 2024 and was last updated on 23 January 2024.

INTRODUCTION

Review question / Objective The objective is to collect the relevant literature in the field of sensory evaluation of seaweed (macroalgae) and food products with seaweed as an additive.

Background There is an urgent need for new protein alternatives from sustainable sources. While seaweed is a common food in several parts of the world, especially in Asia, they are still underutilized in Sweden and the rest of Europe. In order to promote an increased consumption of seaweed in Europe, more knowledge is required. Although current literature does exist, there is no comprehensive review within this field. We believe it is necessary to gather the body of literature and make it more available to public by reviewing it.

Rationale The rationale of this review is to contribute to the current literature and to gain a deeper understanding of possibilities and potential obstacles of reintroducing and promoting the consumption of macroalgae, starting with exploring the sensory characteristics as well as consumer acceptance of seaweed and other food products with seaweed.

METHODS

Strategy of data synthesis The databases as well as the search terms are listed below.
Scopus (Search within title, abstract, keywords): "sensory" OR "descriptive analys*" OR "QDA" OR "descriptive evaluat*" AND "seaweed*" OR "algae" OOR "macroalgae"
Web of science (basic search field - topic): "sensory" OR "descriptive analys*" OR "QDA" OR

"descriptive evaluat*" AND "seaweed*" OR "algae"
OR "macroalgae"
Pubmed (Search within title/abstract): "sensory"
OR "descriptive analys*" OR "QDA" OR
"descriptive evaluat*" AND "seaweed*" OR "algae"
OR "macroalgae".

Author 6 - Kristoffer Stedt - Screening of articles
and contributing with expertise in the seaweed/
marine field.
Email: kristoffer.stedt@gu.se

Eligibility criteria All articles including sensory testing (analytical or affective, with humans) of seaweed.

Source of evidence screening and selection
The search resulted in a total of 1,666 records of which 662 duplicates were removed. 1004 records remained and were screened on title/abstract by author 1 and author 3 with the blind-mode on in Rayyan.ai. The primary screening resulted in 187 (author 1) and 168 (author 2) records with a conflict rate of 4,8 % (48 articles) between the the two authors. The abstracts of the conflicting records were carefully read through again and discussed by author 1 and 3 until they reached consensus. Moreover, the search for full texts belonging to the included records began and resulted in 126 full-text articles in English.

Data management Rayyan.ai is the main tool for managing the literature.

Reporting results / Analysis of the evidence
Tables and narrative text.

Presentation of the results Only articles in English will be included.

Country(ies) involved Sweden.

Keywords sensory analysis; seaweed; macroalgae; consumer acceptance.

Contributions of each author

Author 1 - Sermin Dahlstedt - Screening of articles and writing the manuscript.

Email: sermin.dahlstedt@ikv.uu.se

Author 2 - Jão Trigo - Screening of articles and co-writing the background and discussion.

Email: trigo@chalmers.se

Author 3 - Pernilla Sandvik - Screening of articles and co-writing the manuscript.

Email: pernilla.sandvik@ikv.uu.se

Author 4 - Ingrid Undeland - Screening of articles and contributing with expertise in the seaweed/marine field.

Email: undeland@chalmers.se

Author 5 - Henrik Pavia - Screening of articles and contributing with expertise in the seaweed/marine field.

Email: henrik.pavia@marine.gu.se