Reached Deliverable

Workpackage: WP3

Activity Title: Pilot Taste Panel

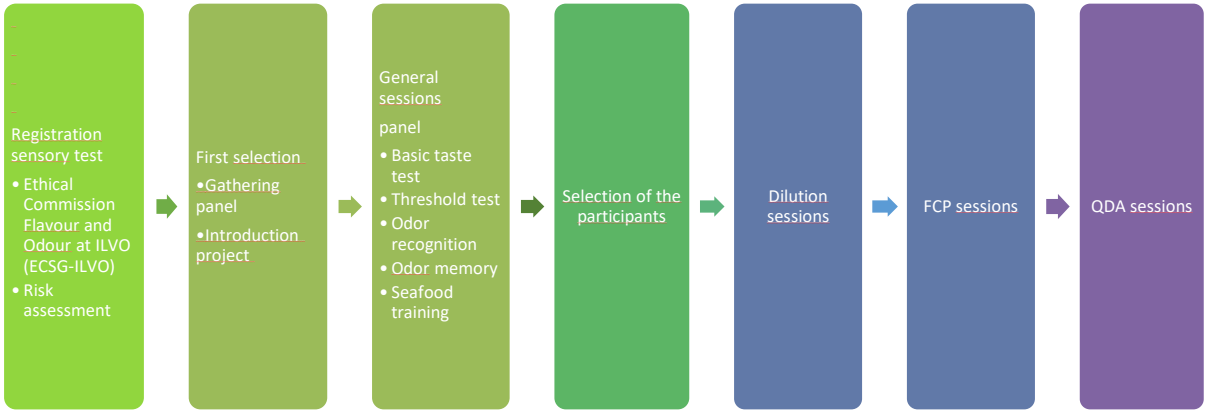
Deliverable/Output: O 4.1

Deadline: 31/01/2021

Report of the reached deliverable (max. 2 pages):

An expert sensory panel was trained to recognize typical algae tastes and aromas. In total 16 participants finished the complete sensory training.. The expertise of the trained panel is used for the evaluation of different algae and eventually product development.

Overview of the training sensory expert panel:



1. **Registration sensory test**

The Commission Flavour and Odour at ILVO (ECSG-ILVO) has the duty to monitor and ensure that the sensory tests are conducted in an ethically acceptable manner. For every sensory session a risk assessment was made to evaluates potential risks of the evaluated products.

2. **First selection**

During the First Selection candidates for training where gathered based

a) on their willingness to be a part of the panel. A short introduction of the project was given.
b) and on a series of tests where their knowledge of basic tastes where evaluated

3. **General sessions**

All candidates participated in the general sessions. These include basic taste tests, threshold tests, odor recognition and odor memory tests. Also a session was given were participants learnt to differentiate typical seafood odour and tastes which could also be important attributes for some algae.

4. **Selection of the participants**

The participant cannot enter the panel if: 1) He/she is unable to correctly name and detect basic tastes, 2) he/she detects the basic tastes in a concentration that is too high, 3) he/she is unable to correctly

order different concentrations of a certain taste 4) No improvement is seen where necessary or 5) Not motivated or negative attitude. In total 16 participants finished the general sessions.

5. Dilution sessions

Algae will be evaluated dry and/or wet. To determine the concentration in which the algae will be tasted, a dilution session was performed. Different algae were diluted in water in different concentrations (0.001 g /L, 0.01 g/L, 0.1 g/L, 1 g/L, 10 g/L and 100 g DW/L). 10 g DW/L was chosen as an acceptable concentration. In this concentration the differences between algae can be distinguished while not be disturbing for the participants.

6. Free choice profiling (FCP) sessions

For the FCP, the group was divided into 3 groups each containing ± 5 participants. Every participant evaluates the algae individually and notes a top 10 of attributes. Each group discusses each top 10 and reduces this to a top 7 of attributes. All top 7 of all groups are collected and discussed in a final discussion.

Top attributes from FCP session:

Odor attributes	**Taste attributes**
Odor intensity	Taste intensity
Floral (violet)	Salty
Grassy	Bitter
Earthy	Umami
Fishy odor	Sweet
Mussel odor	Fishy taste
Crab odor	Mussel taste
	Crab taste
Texture	
Fragility	**Mouthfeel**
Salt cristals	Toughness

7. Quantitative Descriptive Analysis (QDA) sessions

For the QDA, the group was divided into 3 groups each containing ± 5 participants. Every participant evaluates the algae individually according to the attribute list and use line intensity scales. All final line scales are collected and discussed. Because the answers of the participants differ a lot from each other the QDA training was repeated until the scores per attribute are standardized and a final line scale per attribute was obtained.

Final remarks

COVID related, 3 extra people were trained for the expert panel to avoid problems in the future with unpredicted lockdown restrictions.

Already 15 different algae were tasted and evaluated by the trained expert panel. A planning was made for 2021 to evaluate the different processed and cultivated algae.