



**OPEN CALL FOR
ADDITIONAL EXPERIMENTS FOR CHLOROPHYLL
CEN/TC 454 'Algae and algae products'**

Specific agreement: SA/CEN/2016-04/ENER/C2/498-2016/SI2.735225

Background:

The European Commission (EC) and CEN have signed a contract (SA/CEN/2016-04/ENER/C2/498-2016/SI2.735225) under the Framework Partnership Agreement 2014. The project is titled: "Algae or algae based products or intermediates" and is related to the Standardization Request M/547 as regards algae and algae-based products or intermediates.

The objective of the project is to develop standardization deliverables in the Technical Committee **CEN/TC 454 'Algae and algae products'**, which was established in the beginning of 2017.

In the current market several different quantification methods are applied. This situation may lead to discussions about the right amount of chlorophyll. Therefore a new standard quantification method will be developed. CEN/TC 454, working group 6 'Test methods' is currently developing a CEN standard for this (working title: "Algae and algae-based products or intermediates – Methods of sampling and analysis – quantification of chlorophyll").

The new method will be based on HPLC separation techniques, making as much as possible use of the current standards and methods available. Within the project experiments are foreseen performed by at least two organisations on two different methods, followed by a validation process of the final method selected.

Chlorophyll is one of the major pigments present in algae, algae products and all other photosynthetic organisms (e.g. plants). Also high value molecule classes such as carotenes, xanthophylls and phycobilins are pigments more specific to algae and for which determination in algae biomass and algal products could be interesting to standardize.

Objective:

With the experimental results of the project it will be possible to expand the scope and the standard developed to other pigments, such as carotenes, xanthophylls and phycobilins.

If possible, an attempt will be made to incorporate a cheaper method than the HPLC method, on the condition that research on the use of a cheaper method fits into the budget allocated for this topic. The more, it is imperative that this additional method should obtain comparable results and accuracy as the HPLC method.

Tasks to be performed:

- a) Planning the several activities & logistics of the tests to be performed;
- b) Performing chlorophyll measuring tests on x times y samples (red, brown, green, and micro-algae);
- c) Preparing a report based on the test results with conclusions considering the advised method;
- d) Preparing standard method based on the standards already available;
- e) If possible, an attempt will be made to incorporate a more basic method than the HPLC method.

Time schedule:

Deliverable	Period
Start	Q3 2018
Status/update report	Every quarter
Performing tests	Q4 2018/Q1 2019
Concept report and draft standard	Q3 2018
Draft ready for enquiry and final report	Q1 2020

Costs:

A budget needs to be provided, containing a division in:

- Labour costs;
- Consumables (including buying and sending samples);

Note 1: These costs are added separately to every invoice;

Note 2: Prices excl. VAT.

The offer shall be specific on the costs of the project as described above, including the expected time. Consortium offers will also be considered. Offers can also be from a single person, which should however have a VAT number and a company registration.

Selection procedure:

The selection of the candidate who will perform the experiments will be made by a selection panel, which is composed of:

- Mr. Timo de Groot (NEN), “Co-“secretary of CEN/TC 454 'Algae and algae products';
- Mr. Bert van Asselt, Chair of CEN/TC 454 'Algae and algae products';
- Representative of (CCMC) (t.b.d.).



Selection criteria for the tendering process:

Selection of contractors will be based on the following criteria:

1) Documented experience (maximum 50 points):

- Have extensive experience on HPLC measuring techniques on organic matter;
- Ability to incorporate a more basic method than the HPLC method (within budget)

2) Organization; demonstration of ability and understanding of the project (maximum 40 points):

- facilities used for the actual testing;
- organization for the reporting to NEN;
- access to an HPLC.

3) Quotation price and detail (maximum 10 points)

Additional points may be awarded if the tenderer can add additional value to the project. In general, a best value for money principle will be applied.

Only offers that pass the selection criteria of scoring minimum 35 points under 1) and 25 points under 2) are eligible for selection.

NEN considers that proposals requesting a budget in the range of **€20 000-40 000 (excl. VAT)** would allow the study to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

On the effective contract the "General Terms and Conditions for the Provision of Technical Services to NEN" shall apply. A copy of those can be delivered on request. The Contractor should also agree to the fact that the obligation of NEN to pay is subject to the normal functioning of the financing mechanisms of the Commission of the European Union and of the EFTA, also applicable to specific agreement SA/CEN/2016-04/ENER/C2/498-2016/SI2.735225.

Replies to tender:

- Applications should be submitted using the hyperlinked [application form](#) (Answer to a call for Tender in compliance with FPA 2014) by 6 August 2018. Applications received after the deadline will not be taken into consideration.
- Applications shall be sent by e-mail to timo.degroot@nen.nl or indra.teronde@nen.nl
- If necessary, additional information can be obtained via the CEN/TC 454 Secretary, Mr. Indra te Ronde (t: +31 15 2690 326, e: timo.degroot@nen.nl or indra.teronde@nen.nl).
- ***Candidates are herewith informed that interviews with the selection panel (by telephone/GoTo meeting) will be scheduled on 7, 20 and/or 21 August 2018.***