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 www.plantlibra.eu/web

***PLANT food supplements: Levels of Intake, Benefit and Risk Assessment***

**EC project number 245199**

 **Creation of network of laboratories**

**Introduction** - The worldwide interest for plant-derived health products, including plant food supplements (PFS), has gained an enormous increase during the last decade although there are gaps on how the safety of these products can be ensured.

**PlantLIBRA**  (acronym of **PLANT** food supplements: **L**evels of **I**ntake, **B**enefit and **R**isk **A**ssessment ) aims to foster the safe use of food supplements containing plants or botanical preparations, by increasing science-based decision-making by regulators and food chain operators.

**PlantLIBRA** is a project co-financed in the context of the 7th EU Framework Program it spans 4 continents and 25 partners, comprising leading academics, small- and medium sized enterprises, industry and no-profit organizations.

 The project is structured to develop, validate and disseminate data and methodologies for risk and benefit assessment and implement sustainable international cooperation. It will directly achieve, within the four years of length, objectives related to a meta-database containing plant food supplements consumption data, and biologically active substances and contaminants data.

 **PlantLIBRA** works closely with EFSA and also plans cooperation with competent authorities and stakeholders.

**Network of laboratories** - One of the objectives of project ( topic of Work Package 7 ” *Investigation on botanical ingredients and Plant Food Supplements: plant identity, methods, new compounds, network of laboratories”*) is to create an international network of laboratories capable to provide reliable high quality analytical data on plant and botanical preparations and to identify contaminants (chemical and biological) and irradiation treatment. These laboratories, providing tools to ensure safe plant food supplements, could support the work of international organizations (i.e. regulatory bodies) involved in the food safety and also of food manufacturers in achieving high quality products. The network will provide analytical tools to European Poisoning Centres for fast identification of adverse effects to plant ingredients.

The laboratories of the network (including beneficiaries of PlantLIBRA) can be public and private institutions performing regulatory and /or relevant analytical work .

**Questionnaire** - The following questionnaire is addressed to the laboratories that are interested in participating in the network. The document has been prepared in the form of questionnaire in order to rapidly collect information associated with laboratories and to summarize attributes for participation in the network.

The final list of proposed laboratories will be approved by the members of a Reference Group created within the partners involved in the work package 7 of the project that are:

Istituto Superiore di Sanità (Rome); Universitat Wien (Austria); Universitatea Transilvania DIN Brasov (Romania); Council for Scientific and Industrial Research (South Africa); Phytolab GmbH & Co (Germany); Università degli Studi di Milano (Italy), Universidade de Sao Paulo (Brazil), Wageningen University (The Netherlands), International Association for Cereal Science and Technology (Austria), Institute of Food Research (United Kingdom).

The questionnaire has been divided into three sections.

The **first section** provides contact information for laboratory:

1. Laboratory name, address, city, state, and mailing address
2. Points of contact personnel for the laboratory.

The **second section** provides information on:

 a) Analytical activity of the laboratory

 b) Specific analytical areas (expertise of the laboratory)

 c) Quality management system of the laboratory. The information requested relates to the quality assurance program in place to ensure the reliability of the data with particular attention to the requirements stated in  the ISO 17025 standard; other certifications system can be indicated in the comments cell. Information about the accreditation are collected too (If the laboratory is accredited specify the specific test in the cell of comments). All documentation relevant to accreditation and proficiency could be requested.

 d) Specific analytical activity on plant material/extract/plant food supplements

Since the aim is the creation of an international network of laboratories capable to perform reliable analytical assays on plants and botanicals preparations, the information requested are focused on expertise in specific fields: plant/herb identification, determination of beneficial/toxic compounds, contaminants, biomarkers and detection of irradiation treatment .

The **third section** is addressed to laboratory that perform a specific analytical activity on plant material/extracts/PFS and concerns the characteristics of the methods carried out.

 Three  different formats have been prepared on the basis of the type of method:

method for plant/herb identification (Format A);

method for determination of specific compound (beneficial/toxic compound, contaminant, and biomarker) (Format B);

method for detection of irradiation treatment (Format C).

 For each method is requested to indicate: the matrices analyzed, the principle of the method, information on the validation/accreditation, and participation in proficiency tests.

**Submit the filled in questionnaire via electronic mail to Istituto Superiore di Sanità (ISS) using the address provided below:**

**brunella.carratu@iss.it**

**cc:** **concetta.boniglia@iss.it**

**Questionnaire**

**SECTION 1**

**Contact information**

a)

|  |  |
| --- | --- |
| Laboratory name |  |
| Address |  |
| City |  |
| State |  |
| Mailing address |  |

b)

|  |  |
| --- | --- |
| Person of primary contact |  |
| Title |  |
| Email |  |
| Phone No. |  |
| Mobile Phone No. |  |
| Fax |  |

|  |  |
| --- | --- |
| Person of secondary contact |  |
| Title |  |
| Email |  |
| Phone No. |  |
| Mobile Phone No. |  |
| Fax |  |

**SECTION 2**

a)

|  |  |  |  |
| --- | --- | --- | --- |
| **Laboratory** | **Yes** | **No** | **Comments** |
| Public |  |  |  |
| Non profit |  |  |  |
| Private |  |  |  |
| Does laboratory perform official controls? |  |  |  |
| Does the laboratory have experience in the analysis of plant/plant food supplements? |  |  |  |
| Does laboratory participate in any Laboratory Networks?  |  |  |  |

b)

|  |  |  |  |
| --- | --- | --- | --- |
| **Laboratory analytical areas** | **Yes** | **No** | **Comments** |
| Microscopy |  |  |  |
| Microbiology |  |  |  |
| Chemistry |  |  |  |
| Physics |  |  |  |
| Molecular biology |  |  |  |
| Other |  |  |  |

c)

|  |  |  |  |
| --- | --- | --- | --- |
| **Quality system** | **Yes** | **No** | **Comments** |
| Does laboratory have a documented quality management system? |  |  |  |
| Does laboratory operate according to ISO 17025 standard? |  |  |  |
| Is the laboratory accredited? \* |  |  |  |
| Has the laboratory participated to Proficiency test?\* |  |  |  |

\*If the answer is yes indicate the specific tests in the cell “Comments”

d)

|  |  |
| --- | --- |
| **Specific analytical activity on plant material/Plant Food Supplements**  | **Details** |
| Plant/herb identity | 1. e.g. *Serenoa repens*
2. *…….*
3. *…….*
 |
| Beneficial/toxic compound | 1. e.g. Phytosterols in *Serenoa repens*
2. …………
3. ………..
 |
| Contaminant | 1. e.g. Cadmium in *Serenoa repens*
2. ………..
3. ………..
 |
| Detection of irradiation treatment | 1. e.g. *Serenoa repens*
2. ……..
3. ……..
 |
| Biomarker | 1. e.g. ALAT in plasma
2. ………
3. ……..
 |

**SECTION 3**

In function of the specific analytical activity fill the following format:

* Method for plant/herb identification: Format A
* Method for determination of specific compound: Format B
* Method for detection of irradiation treatment: Format C

**Format A**

**Method for plant/herb identification:**

**Plant/herb: ……………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Matrix analysed** | **Yes** | **No** | **Comments** |
| Plant or plant part |  |  |  |
| Extract |  |  |  |
| PFS |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Yes** | **No** | **Comments** |
| Morphological identification |  |  |  |
| Phytochemical identification  |  |  |  |
| DNA-based identification |  |  |  |

**Principle of the method**

**…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Additional information about method** | **Yes** | **No** | **Comments** |
| Use of Reference standard/material |  |  |  |
| Proficiency test |  |  |  |
| Accredited |  |  |  |
| Validated |  |  |  |
| Standard method \* |  |  | Reference |

\* Method published in international, regional or national standard

**Format B**

 **Method for determination of specific compound**

**Compound or category of compounds ………….**

**Specify in which plant/herb: ……………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Matrix analysed** | **Yes** | **No** | **Comments** |
| Plant or plant part |  |  |  |
| Extract |  |  |  |
| PFS |  |  |  |
| Biosample |  |  |  |

**Principle of the method**

**…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Additional information about method** | **Yes** | **No** | **Comments** |
| Use of Reference standard/material |  |  |  |
| Proficiency test |  |  |  |
| Accredited |  |  |  |
| Validated |  |  |  |
| Standard method\* |  |  | Reference |

\* Method published in international, regional or national standard

**Format C**

**Method for detection of irradiation treatment**

**Plant/herb: ……………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Matrix analysed** | **Yes** | **No** | **Comments** |
| Plant or plant part |  |  |  |
| Extract |  |  |  |
| PFS |  |  |  |

**Principle of the method**

**…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

|  |  |  |  |
| --- | --- | --- | --- |
| **Additional information about method** | **Yes** | **No** | **Comments** |
| Use of Reference standard/material |  |  |  |
| Proficiency test |  |  |  |
| Accredited |  |  |  |
| Validated |  |  |  |
| Standard method\* |  |  | Reference |

\* Method published in international, regional or national standard