

COMPENDIUM OF BOTANICALS AS A HAZARD IDENTIFICATION TOOL FOR ASSESSMENT OF BOTANICALS AND THEIR PREPARATION IN FOOD AND SUPPLEMENTS

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INTRODUCTION

Naturally occurring substances are widely present in all plant species. Some of these compounds have a strong biological effect on different organisms and their presence in food or food supplements presents a potential risk to human and animal health. These compounds are reported in a newly developed database called Compendium of Botanicals. This database facilitates risk assessment, particularly hazard identification. The project aimed to perform an extensive literature search and data extraction for approximately 2600 plant species and 1100 substances naturally occurring in plant species that are potentially of concern.

METHODOLOGY

To manage and organise large datasets of valuable scientific information, online tools needed to be developed for effective management, extraction and storage of the results of the extensive literature searches. These tools keep data organised, consistent and reproducible throughout the project. The main focus of the data extraction was the identification of information related to the toxic/adverse effects of the plant extracts on human and animal health and the identification of substances/groups of substances of concern naturally occurring in botanical species and their hazard characterisation.

RESULTS

Extensive literature search and data extraction were performed for 2100 plant species existing within and outside Europe. So far, 1771 botanicals have been processed, and 604 botanicals have been recognized as being of potential concern to human/animal health. Further data extraction resulted in the identification of more than 100 groups and over 1100 chemicals of concern. So far, 600 chemicals have been processed and 180 have been identified as being of potential concern to human/animal health. These data are currently

being validated by EFSA. All the extracted data were cross-checked by independent reviewers. The collected information was validated and approved by the EFSA Scientific Committee Working Group on Botanicals; it has been transferred to the EFSA data warehouse using the EFSA Data Collection Framework and will be made freely available to the general public on the EFSA website.

DISCUSSION

The newly created online database can be used as a toolkit that facilitates the safety assessment of plant-based products. Such information enabled the competent authorities of Member States to perform safety and quality assessments when introducing food or food supplements to their markets.