

# SAFFIC

## Methodologies for Implementing International Standards for Saffron Purity and Quality

Saffron is the most precious and most expensive spice in the world. The greatest saffron producers are Greece, India, Iran, Italy, Morocco and Spain. The largest saffron importers are France, Germany, Sweden, Switzerland, the UK and the US. In the past years, the fraudulent practices have proliferated, in part due to high prices and also to the lack of technological methodologies available to detect them. In fact, the ISO/TS 3632 (2003) norm that regulates the purity and quality of saffron does not take into account any reliable analytical technique to detect basic colorants and natural pigments, to fight against fraud and to establish objective criteria of quality and food safety; neither is there a methodology to assure food safety by determining microbiological contamination. One of the most common fraudulent practices is the use of synthetic colorants and natural pigments. Those products are used in small amounts to dye saffron threads or other plants. Therefore, the scientific and technological problem to overcome is the development of cost-effective, easy-to-use and reliable methodologies for:

the identification of fraudulent agents in saffron: synthetic colorants and natural pigments;

the standardisation of the quality and food safety criteria of saffron.

The industrial associations or groupings (IAGs) and small to medium-sized enterprises (SMEs) aim to develop new methodologies to modify the current ISO norm, by introducing standards and reliable procedures to fight against fraud. For this purpose, seven European saffron IAGs and nine SMEs are directly involved in the project. IAGs and SMEs are supported by four research and technological development (RTD) performer experts in saffron and eight independent certified laboratories for the validation of the methodologies. The results will be mainly disseminated and transmitted to the associated and non-associated SMEs by means of a protocol that will be base of the new ISO norm. The introduction of the new standardised methodologies that define the criteria of purity, quality and food safety will be the main tool for the defence of the competitiveness of the European SMEs of the saffron field. Besides SMEs, the new tool will be disseminated in quality control centres

(certified laboratories and customer offices for import and export) to ensure the importation conditions of the saffron into Europe. The implementation of the ISO norm will benefit not only the European sector but the worldwide one. The saffron market aims to gain consumer trust in saffron quality by means of an international norm. The defence of the saffron market will benefit employment in producer countries. Saffron importers will benefit from the absence of synthetic colorants and non-controlled pigments in saffron. The control of the use of synthetic colorants will eliminate its toxic effects when used for the adulteration of saffron. Standardised microbiological control will contribute to consumer safety and will permit rejection of any batch from third countries not fulfilling the food safety requirements in Europe.

- 1 ASOCIACIÓN ESPAÑOLA DE ENVASADORES DE ESPECIAS Y CONDIMENTOS (ES)
- 2 ASOCIACIÓN ESPAÑOLA DE NORMALIZACIÓN Y CERTIFICACIÓN (ES)
- 3 SU ZAFFERANU (IT)
- 4 ASOCIAȚIA PRODUCĂTORILOR, PRELUCRĂTORILOR ȘI UTILIZĂTORILOR DE PLANTĂ MEDICINALE (RO)
- 5 KROKOS KOZANI COOPERATIVE OF SAFFRON (GR)
- 6 HELLENIC ORGANIZATION FOR STANDARDIZATION (GR)
- 7 CONSEJO REGULADOR DE LA DENOMINACIÓN DE ORIGEN LA MANCHA (ES)
- 8 VERDÚ-CANTÓ SAFFRON SPAIN S.L. (ES)
- 9 COMPAÑÍA EXPORTADORA DE AZAFRÁN ESPAÑOL (ES)
- 10 PROALIMENT JESUS NAVARRO S.A. (ES)
- 11 AROMATIC (SE)
- 12 FRANCO CURRELLI (IT)
- 13 MARIE CARMINE ENNAS (IT)
- 14 FRANCESCO SANNA (IT)
- 15 BAKATZOUNIS (GR)
- 16 S.C. NUTRACEUTICAL (RO)
- 17 UNIVERSIDAD DE CASTILLA-LA MANCHA (ES)
- 18 AGRICULTURAL UNIVERSITY OF ATHENS – AUA (GR)
- 19 INSTITUTO TECNOLÓGICO AGRONÓMICO PROVINCIAL DE ALBACETE (ES)
- 20 UNIVERSIDAD ALCALA DE HENARES (ES)
- 21 COLEGIO FARMACÉUTICO DE ALICANTE (ES)
- 22 INSTITUTO DE INVESTIGACIONES AGROALIMENTARIAS (ES)
- 23 LABORATORIO QUÍMICO MICROBIOLÓGICO (ES)
- 24 KAISERLAUGHTERN UNIVERSITY (DE)
- 25 INSTITUTO AGRONÓMICO (ES)
- 26 MICROBIOLOGICAL AND CHEMICAL INSTITUTE OF ATHENS (GR)
- 27 LABRAGO (PT)
- 28 INSTITUTE DE LA SANTE ET LA SÉCURITÉ PUBLIQUE (BE)

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