

# Food Processing & Technology

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## The Biotappo: A new tool for food safety

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In Europe, the EU Regulation No. 1935/2004 and the EU Regulation No. 10/2011 set out general principles of safety and inertness for all Food Contact Materials (FCMs) and rules on the composition of plastic FCMs, respectively. Among the plastics commonly used for bottled water, polyethylene terephthalate (PET) is the most favorable packaging material. Nonetheless, non-intentionally added substances (NIAS) which may be cancerogenic or toxic or which may have potential estrogenic and/or anti-androgenic activities can be found in the final plastic material, due to storage. High temperature and sunlight influence the rate and magnitude of leaching of NIAS from PET bottles. Monitoring of the temperatures to which bottled waters are exposed during transportation and/or storage may be crucial in predicting the migration of NIAS from PET to water or other beverages. To this aim, a special bottle cap was produced. The top of the cap is covered with a special paint which, when left outdoors in the sun or exposed to high temperatures (>75°C) for at least 1 h, turns color from pink to lilac. The HACCP System requires that biological, chemical or physical potential hazards are identified and controlled at specific points in the process. Any company involved in the manufacturing, processing or handling of food products can use HACCP to minimize or eliminate food safety hazards in their product. For PET bottled waters, high temperature is a critical limit for the CCP. If this limit is exceeded corrective actions must be taken. In some countries, the summer season is really hot and the storing of bottled water out of markets under sunlight is a very common practice. Moreover, generally trucks that transport water bottles are not refrigerated. The Biotappo could be a useful tool for identifying the CCP in order to eliminate the hazards.

## Biography

Maria Anna Coniglio is a Medical Doctor and a Researcher of Hygiene and Preventive Medicine at the University of Catania. She has her expertise in improving public health. She has published in the field of plasmid-mediated multiple antibiotic resistance of pathogens in wastewater used in agriculture and in ready-to-it-salads.

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Cristian Fioriglio is a Doctor in Biology and a Police Officer working in a special task force aimed at preventing risks and hazards. He is also a Food Technologist interested in Food Safety. He has his expertise in HACCP.

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