PROGRAM & BOOK OF ABSTRACTS

FOODINTEGRITY 2017 CONFERENCE

10-11 MAY 2017

STARHOTEL DU PARC PARMA, ITALY

Assuring the integrity of the food chain: Turning science into solutions

EDITORS

MICHELE SUMAN - ELENA MAESTRI - PAUL BRERETON

Barilla
The Italian Food Company Since 1877

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FOODINTEGRITY 2017 CONFERENCE: SCIENTIFIC CONTRIBUTIONS GLOBAL OVERVIEW

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Ensuring the Integrity of the European food chain (FoodIntegrity)

The project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement No. 613688.

www.foodintegrity2017-parma.eu
https://www.facebook.com/foodintegrity2017parma/
#FoodIntegrityParma17

Published by Barilla, Università di Parma, Siteia Parma.

Edited by Michele Suman, Elena Maestri and Paul Brereton.

Editorial realization by Sale in Zucca.

ISBN 9788894106657

P88

STABLE ISOTOPE RATIOS OF H, C, O, N AND S FOR THE GEOGRAPHICAL TRACEABILITY OF ITALIAN RAINBOW TROUT (ONCORHYNCHUS MYKISS)

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Keywords: Isotope Ratio Mass Spectrometry, rainbow trout (Oncorhynchus mykiss), diet, traceability.

Multielement isotope ratio was assessed in fat and defatted (protein) fillet of 130 rainbow trout, reared with feed incorporating a high or low fish content in 20 Italian farms, focusing on two northern Italian regions (Friuli Venezia Giulia and Trentino) . The aim was to investigate the ability of isotopic analysis to trace the geographical origin of trout, also according to the type of feed. The carbon, nitrogen and sulphur isotope ratios of feed and fillet were highly positively correlated both within each matrix (feed or fillet) and between the two matrices and negatively correlated with the δ2H and δ18O of feed and the δ2Hfat. The δ2Hprotein and δ18Oprotein were positively interrelated with the δ18O of tank water. By applying the tested Partial Least Squares – Discriminant Analysis multiclass model (85 fillets) to the validation dataset (45 fillets), 91% accuracy was obtained for the two Italian regions.

Acknowledgments: Research founded by I.R.IDEA Project art.17 LR 10, 10 November 2005, n 26 Friuli Venezia Giulia Autonomous Region.