

## ***Supplementary Data***

### **Assessment of pesticide contamination in cereals and legumes by gas-chromatography - mass spectrometry**

Valeria Nardelli<sup>a</sup>, Valeria D'Amico<sup>a</sup>, Mariateresa Ingegno<sup>a</sup>, Ines Della Rovere<sup>a</sup>, Marco Iammarino<sup>a</sup>, Francesco Casamassima<sup>a</sup>, Anna Calitri<sup>a</sup>, Donatella Nardiello<sup>b</sup>, Donghao Li<sup>c</sup>, Maurizio Quinto<sup>b,c,\*</sup>

<sup>a</sup>Istituto Zooprofilattico Sperimentale della Puglia e della Basilicata, Via Manfredonia 20, Foggia 71121, Italy

<sup>b</sup>Dipartimento di Scienze Agrarie, Alimenti, Risorse Naturali e Ingegneria - Università degli Studi di Foggia, Via Napoli, 25 - 71122 Foggia (Italy)

<sup>c</sup>Department of Chemistry, Yanbian University, Park Road 977, Yanji 133002, Jilin Province, China

---

\*Corresponding author. Tel: +39 0881 589102; e-mail address: maurizio.quinto@unifg.it

**Table S1** – Risk exposure by pesticide residues of pirimiphos-methyl, cypermethrin, cyfluthrin, deltamethrin, fenvalerate, and phenothrin in pasta under high exposure scenario

<b>PASTA*</b>	<b>Pirimiphos-methyl</b>			<b>cypermethrin</b>			<b>cyfluthrin</b>		
<b>Female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0057	0.0059	0.59	0.0041	0.0002	0.34	0.0005	< 0.00001	0.010
<i>Adolescents</i>	0.0055	0.0057	0.57	0.0039	0.0002	0.33	0.0005	< 0.00001	0.010
<i>Adults</i>	0.0046	0.0008	0.08	0.0033	< 0.0001	0.05	0.0004	< 0.00001	0.002
<i>Elderly</i>	0.0049	0.0009	0.09	0.0035	< 0.0001	0.05	0.0005	< 0.00001	0.002
<b>Male</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0055	0.0057	0.57	0.0039	0.0002	0.33	0.0005	< 0.00001	0.011
<i>Adolescents</i>	0.0061	0.0064	0.64	0.0044	0.0002	0.37	0.0006	0.00001	0.012
<i>Adults</i>	0.0058	0.0010	0.10	0.0041	< 0.0001	0.06	0.0006	< 0.00001	0.002
<i>Elderly</i>	0.0059	0.0010	0.10	0.0042	< 0.0001	0.06	0.0006	< 0.00001	0.002
<b>Male + female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0057	0.0058	0.58	0.0040	0.0002	0.33	0.0005	< 0.00001	0.011
<i>Adolescents</i>	0.0058	0.0060	0.60	0.0041	0.0002	0.34	0.0006	0.00001	0.012
<i>Adults</i>	0.0052	0.0009	0.10	0.0037	< 0.0001	0.05	0.0005	< 0.00001	0.002
<i>Elderly</i>	0.0053	0.0009	0.10	0.0038	< 0.0001	0.05	0.0005	< 0.00001	0.002

\* Source: INRAN-SCAI 2005-06. [https://www.crea.gov.it/documents/59764/0/appendice\\_1b2\\_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003](https://www.crea.gov.it/documents/59764/0/appendice_1b2_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003)

<b>PASTA*</b>	<b>deltamethrin</b>			<b>fenvalerate</b>			<b>phenothrin</b>		
<b>Female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0009	0.00001	0.038	0.0009	0.00016	0.021	0.0006	0.00003	0.0034
<i>Adolescents</i>	0.0009	0.00001	0.036	0.0009	0.00016	0.021	0.0006	0.00003	0.0033
<i>Adults</i>	0.0007	< 0.00001	0.005	0.0007	0.00002	0.003	0.0005	< 0.00001	0.0005
<i>Elderly</i>	0.0008	< 0.00001	0.006	0.0008	0.00002	0.003	0.0006	< 0.00001	0.0005
<b>Male</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0009	0.00001	0.036	0.0009	0.00016	0.021	0.0006	0.00003	0.0033
<i>Adolescents</i>	0.0010	0.00001	0.041	0.0010	0.00018	0.023	0.0006	0.00004	0.0037
<i>Adults</i>	0.0009	< 0.00001	0.007	0.0009	0.00003	0.004	0.0007	< 0.00001	0.0006
<i>Elderly</i>	0.0009	< 0.00001	0.007	0.0009	0.00003	0.004	0.0007	< 0.00001	0.0006
<b>Male + female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0009	0.00001	0.037	0.0009	0.00016	0.021	0.0006	0.00003	0.0033
<i>Adolescents</i>	0.0009	0.00001	0.038	0.0009	0.00017	0.022	0.0007	0.00004	0.0035
<i>Adults</i>	0.0008	< 0.00001	0.006	0.0008	0.00003	0.003	0.0006	< 0.00001	0.0005
<i>Elderly</i>	0.0008	< 0.00001	0.006	0.0008	0.00003	0.003	0.0006	< 0.00001	0.0005

\* Source: INRAN-SCAI 2005-06. [https://www.crea.gov.it/documents/59764/0/appendice\\_1b2\\_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003](https://www.crea.gov.it/documents/59764/0/appendice_1b2_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003)

**Table S2** – Risk exposure by pesticide residues of pirimiphos-methyl and chlorpyrifos in bread under high exposure scenario

<b>BREAD*</b>	<b>pirimiphos-methyl</b>			<b>chlorpyrifos</b>		
<b>Female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0042	0.0040	0.40	0.0012	0.0050	0.0083
<i>Adolescents</i>	0.0051	0.0053	0.53	0.0014	0.0060	0.0097
<i>Adults</i>	0.0052	0.0009	0.09	0.0015	0.0011	0.0018
<i>Elderly</i>	0.0061	0.0011	0.11	0.0017	0.0012	0.0020
<b>Male</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0046	0.0048	0.48	0.0013	0.0054	0.0090
<i>Adolescents</i>	0.0073	0.0076	0.76	0.0021	0.0086	0.0146
<i>Adults</i>	0.0076	0.0011	0.14	0.0022	0.0015	0.0024
<i>Elderly</i>	0.0083	0.0015	0.15	0.0023	0.0017	0.0027
<b>Male + female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.0044	0.0046	0.46	0.0013	0.0052	0.0090
<i>Adolescents</i>	0.0061	0.0063	0.63	0.0017	0.0071	0.0119
<i>Adults</i>	0.0063	0.0011	0.11	0.0018	0.0013	0.0021
<i>Elderly</i>	0.0070	0.0012	0.20	0.0020	0.0014	0.0024

\* Source: INRAN-SCAI 2005-06. [https://www.crea.gov.it/documents/59764/0/appendice\\_1b2\\_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003](https://www.crea.gov.it/documents/59764/0/appendice_1b2_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003)

**Table S3** – Risk exposure by pesticide residues of pirimiphos-methyl in breakfast cereals under high exposure scenario

<b>BREAKFAST CEREALS*</b>	<b>pirimiphos-methyl</b>		
<b>Female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.00005	0.00006	0.0056
<i>Adolescents</i>	0.00004	0.00004	0.0038
<i>Adults</i>	0.00004	< 0.00001	0.0006
<i>Elderly</i>	0.00002	< 0.00001	0.0003
<b>Male</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.00007	0.00008	0.0075
<i>Adolescents</i>	0.00007	0.00008	0.0075
<i>Adults</i>	0.00002	< 0.00001	0.0003
<i>Elderly</i>	0.00002	< 0.00001	0.0003
<b>Male + female</b>	<b>mg die<sup>-1</sup></b>	<b>% NOAEL</b>	<b>% ADI</b>
<i>Children</i>	0.00007	0.00008	0.0075
<i>Adolescents</i>	0.00005	0.00006	0.0056
<i>Adults</i>	0.00002	< 0.00001	0.0003
<i>Elderly</i>	0.00002	< 0.00001	0.0003

\* Source: INRAN-SCAI 2005-06. [https://www.crea.gov.it/documents/59764/0/appendice\\_1b2\\_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003](https://www.crea.gov.it/documents/59764/0/appendice_1b2_cereali.pdf/1439e069-bdc2-2375-e4eb-8204cad664cf?t=1550823135003)