**Human case study (DON - NIV - T2+HT2)**

Consumption data

EFSA Foodex2-level-1 (Grains and grain-based products)

For each country mean and P95 were extracted for adolescent, adult and elderly

- *consum\_data.xls* file

Occurrence data

Mychif database, all cereals-food

DON, NIV, T2+HT2 and their masked forms data were extracted for each country (sampCountry) - *occurrence\_final\_risk.xls*. The sum of the mycotoxin equivalent

was included - *toxin concentration.xls\**.

Co-occurrence data

Mychif database, all cereals-food

DON, NIV, T2+HT2 and their masked forms data were extracted for each country (sampCountry) - *co-occurrence\_final\_risk.xls*. The sum of the mycotoxin

equivalent was included - *toxin concentration.xls\**.

Exposure assessment

Three different scenarios were included:

- Lower bound (\*green xls file), not detects => LOD=0 and LOQ=LOD

- Medium bound (\*yellow xls file), not detects => LOD=LOD/2 and LOQ=LOQ/2

- Upper bound (\*red xls file), not detects => LOD=LOD and LOQ=LOQ

For each scenario, exposure was calculated as

EXPi = [consumption (g/day) / 1000] \* mycotoxin occurrence (µg/kg)

for each macroarea identified taking into account both climate characteristics

and latitude (EFSA 2012, MODMAP-AFLA, Table 1)) and as average of the

whole dataset - *EXP.xls*.

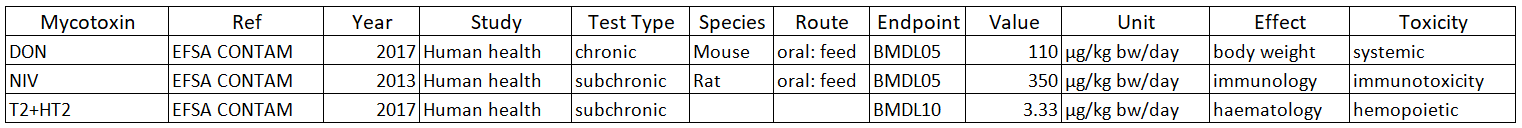
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| --- | --- |
| Macroareas names | Countries per macroarea |
| BALKGREE | Balkans, Bulgaria, Greece, Slovenia, Cyprus |
| BALTIC | Estonia, Latvia, Lithuania |
| EEUROPA | Slovakia, Hungary, Romania, Poland |
| ENG | Ireland and United Kingdom |
| IBERIA | Spain and Portugal |
| ITALIA | Italy, Malta |
| MIDDLEEU | France, Switzerland, Austria, Belgium, Netherlands, Germany, Czech Rep, Denmark |
| SCAND | Norway, Sweden, Finland |
| ALL | All countries |

List of countries per macroarea (Table 1)

Hazard and Equivalen Factors identification

Reference points have been extracted from the EFSA CONTAM opinion (Figure

1).



Equivalent factors have been calculated using the most potent compound being

T2+HT2:

EFi = PODT2+HT2 / PODi

Obtaining EF=1 for T2+HT2; EF=0.03 for DON; EF=0.0095 for NIV

Risk characterization

For each scenario and each dataset we then corrected the exposure to each

mycotoxin using EFi (*EF.xls file*)

EF\_EXPi = EXPi \* EFi

and then we calculated the total exposure as sum of all EF\_EXPi (combined dose

addiction) (*SEF\_MOE.xls file*)

EF\_EXPtot = EF\_EXPDON + EF\_EXPNIV + EF\_EXPT2+Ht2

Finally a margin of exposure (MoE ) was calculated using the total exposure and the Reference Point of the most potent compound (T2+HT2) (*SEF\_MOE.xls file*):

MOEtot = PODT2+HT2 / EF\_EXPtot

With MOE < 100 in red (*SEF\_MOE.xls file*):