Figure captions:

- **Figure S1.** Chromatogram of standard mixture of 6 phthalates obtained by method 1; BBP, butyl benzyl phthalate; DBP, di-n-butyl phthalate; DNOP, di-n-octyl phthalate; DEHP, di-2-ethylhexyl phthalate; DINP, diisononyl phthalate; DIDP, diisodecyl phthalate.
- **Figure S2.** Chromatogram of standard mixture of 7 phthalates obtained by method 2; DBP, di-n-butyl phthalate; DIBP, diisobutyl phthalate; BBP, butyl benzyl phthalate; DNOP, di-n-octyl phthalate; DEHP, di-2-ethylhexyl phthalate; DINP, diisononyl phthalate; DIDP, diisodecyl phthalate.
- **Figure S3**. Chromatogram of the blank sample, with labelled regions where phthalates are expected (used for LOD determination), obtained by method 1.
- **Figure S4**. Chromatogram of the blank sample, with labelled regions where phthalates are expected (used for LOD determination), obtained by method 2.
- **Figure S5.** Chromatogram of the sample from proficiency testing during 2021 obtained by method 1 (PT LGC 2021).
- **Figure S6.** Chromatogram of the sample from proficiency testing during 2021 obtained by method 2 (PT LGC 2021).
- **Figure S7.** Chromatogram of the sample from proficiency testing during 2016 obtained by method 1, diluted (PT CHECK 2016).
- **Figure S8**. Chromatogram of the sample from proficiency testing during 2017 obtained by method 1, diluted (PT CHECK 2017).
- **Figure S9a**. Chromatogram of the toy sample A that contains DBP, DEHP and DINP obtained by method 1.
- **Figure S9b**. Chromatogram of the toy sample A that contains DBP, DEHP and DINP obtained by method 2.
- **Figure S10**. Chromatogram of the toy sample B that contains DBP and DEHP obtained by method 1.
- **Figure S11**. Chromatogram of the toy sample C that contains DBP, DEHP and trace of DIBP, obtained by method 2.