



Prato district Report

Detox companies: APEO's investigation report

Prato, August 2016

Detox Commitment of 27 mills in Prato Textile district

In February 2016, for the first time in the world, 20 manufacturing companies of the Prato district and members of Confindustria Toscana Nord, endorsed the Detox commitments and acknowledged how important it is to eliminate dangerous substances from the textile production cycle. In this group, in March, we have added other 7 companies, thereby significantly increasing the volumes of the products concerned by the commitment Detox. Supported and led by the association, the companies have started their improvement process through the elimination of such substances according to the transparency, prevention and precaution principles of the Detox campaign and have accepted the media challenge of the Greenpeace campaign which has rapidly changed the attention and the contents of the great fashion brands' terms of contracts.

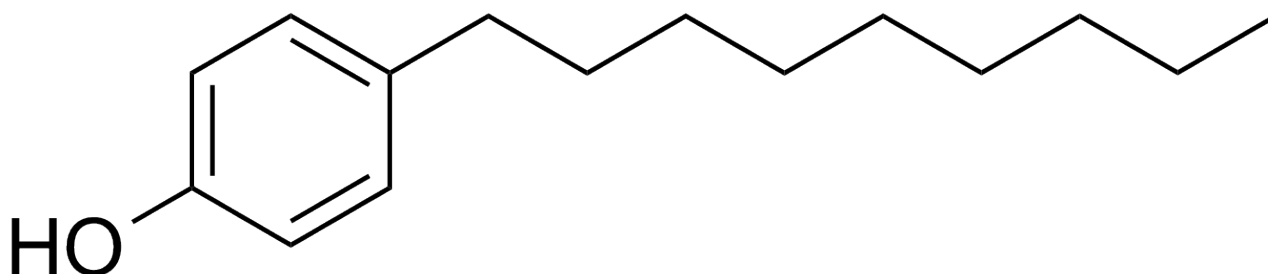
In this roadmap, the mills are committed to eliminate Alkylphenols away from their supply-chain.

Complete List of Detox committed companies is available on CTN website at:

<https://www.confindustriatoscananord.it/sostenibilita/detox/english-version>

Applications of Ethoxylated Alkylphenols (APEOS)

Ethoxylated alkylphenols (APEOS) are a large category of non-ionic surfactants which have good performances as detergents, emulsifiers, disperdents and so on.



APEOS and especially ethoxylated nonylphenols (NPEO) had a large use in textile industry (detergents, emulsifiers) but also in home and domestic use.

Other industrial branches that can use APEOS are leather industry, cosmetics, health-care products and home products; furthermore, some nonylphenols derivatives were found in plastics as antioxidants.

Regarding ethoxylated octylphenols, despite less trusty data are available, they seem to have the same uses as nonylphenols.

Enviroment arrangement

Ethoxylated (APEOS) and non-ethoxylated (AP) alkylphenols are present in ground and sea water, in sediment because of their gathering capability, in sludge and waste disposal. Even studies on fauna are still poor, high level of APEOS were detected in birds and fishes living near rivers that flow in regions where there are APEOS production plants.

It's foreseeable the presence of APEOS in finished textiles products because of probable contamination of chemical products (surfactants, emulsifiers, dyestuffs) and/or in raw materials (wool, cashmere, and so on).

Recent studies show the presence of APEOS in some food in Germany, but clinical effects on human body are not still well explained



Risks due to APEOS:

Dangerousness of APEOS derived from their degradation in less-ethoxylated short chain derivatives and in non-ethoxylated original phenols (e.g nonylphenol and octylphenol).

Risk assessment made by EU reveal that use of APEOS cause high risks to aquatic organisms because of their oestrogen activity that can mimic natural hormones.

This can lead to abnormal sexual behaviour of many organisms: the most important example is “femminisation” of fishes reported in United Kingdom (Jobling et al. 2002).

Human risks still remain unclear, although recent studies pointed out a feasible disease in mammalian spermatogenic function and some damages in human lymphoid cell’s DNA.



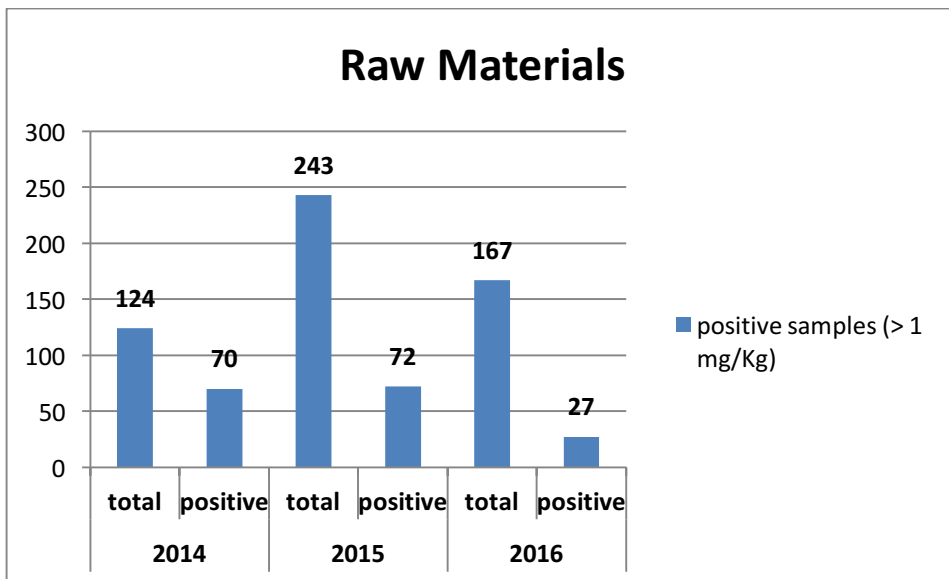
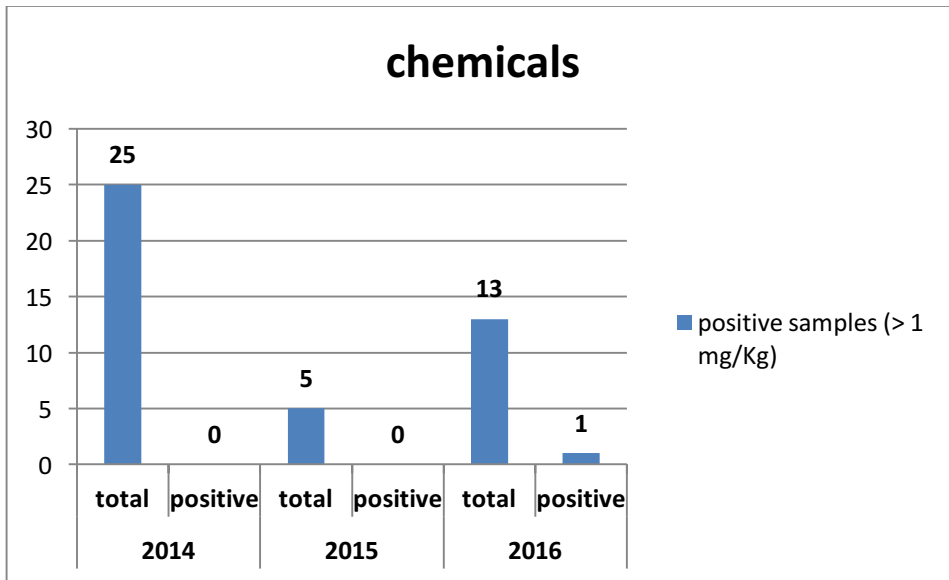
APEOS investigation plan results

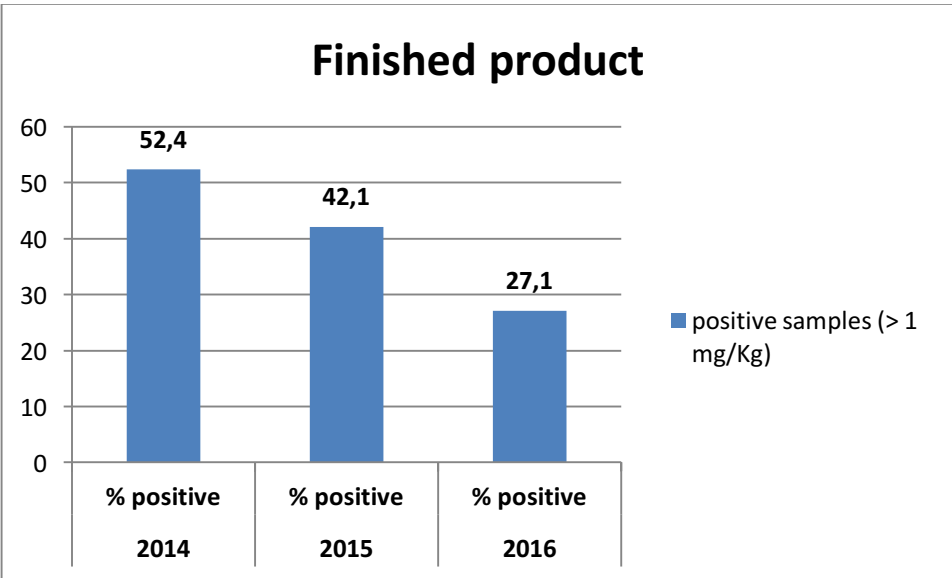
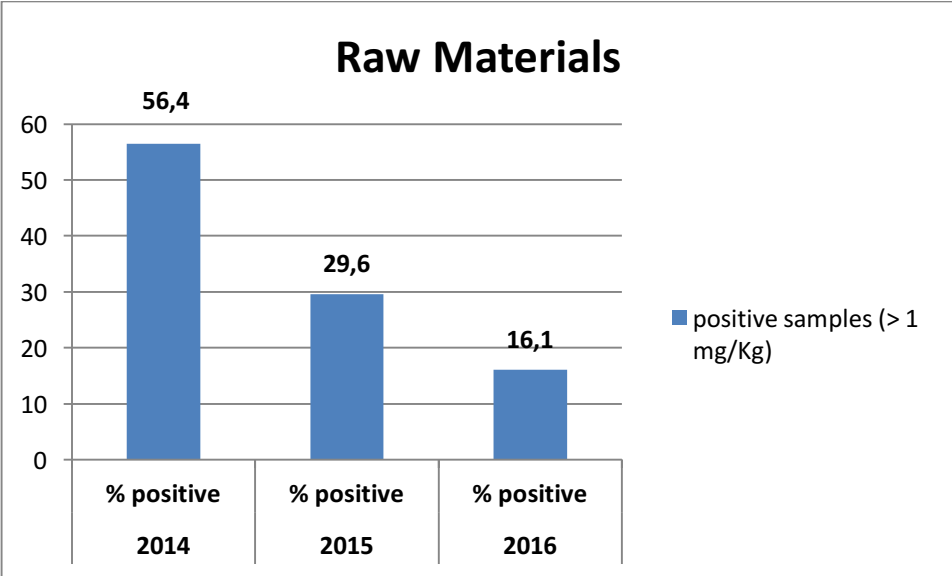
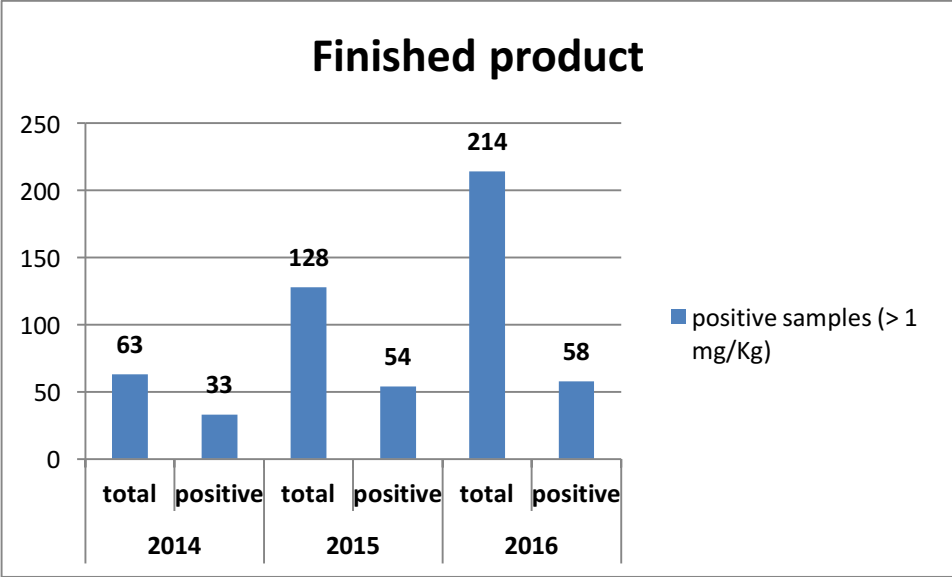
Detox committed companies in Prato District started an investigation plan in order to monitoring their supply chain and internal manufacturing processes.

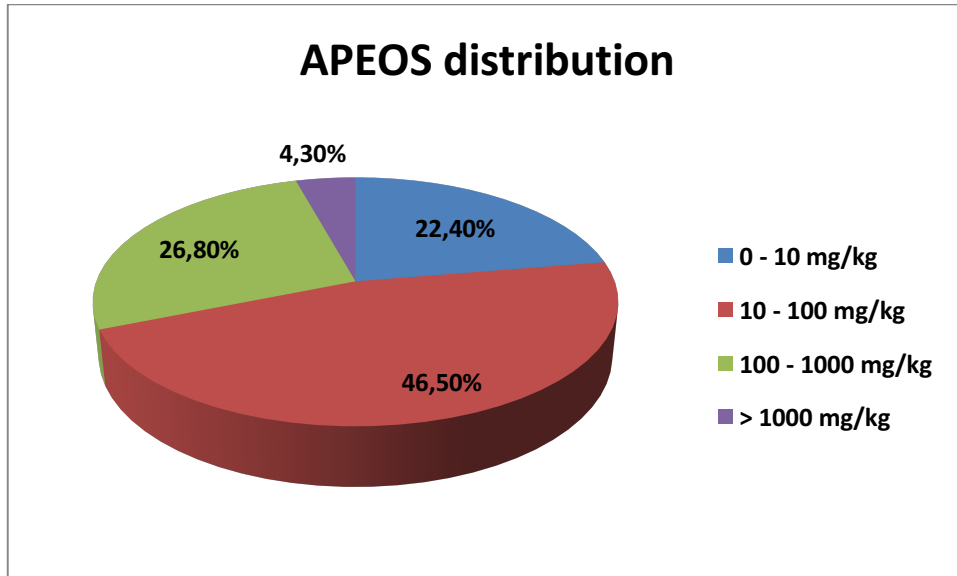
Analytical results of singles companies are available on own website:

1. A.CHI.MO. SRL - chimici - <http://www.achimo.it/detox-ambiente.php?sez=det>
2. ALBERTO BARDAZZI SPA -produttore di tessuti - <http://www.bardazzi.it/detox/>
3. CROMOS SRL - nobilitazione filati - <http://www.tintoriacromos.it/sostenibilita.html>
4. DAYKEM SRL - chimici - <http://www.daykem.it/sostenibilita/>
5. FASHION MILL SRL - produttore di filati - <http://www.newmill.it/struttura.htm>
6. F.LLI CIAMPOLINI & C. SPA - nobilitazione tessuti - <http://www.ciampolini.biz/sost.html>
7. FILATI BE.MI.VA. SPA - produttori di filato <http://www.bemiva.it/responsabilita-aziendale/>
8. FILATI BIAGIOLI MODESTO SPA - produttori di filato - <http://www.filatibiagioli.it/it/progetto-detox.asp>
9. FILATURA PAPI FABIO SPA - produttori di filato - <http://papifabio.com/certificazioni/>
10. FINISSAGGIO T.R.T. SRL – nobilitazione filati - <http://www.finissaggiotrt.it/2016/03/20/dati-detox/>
11. FURPILE IDEA SPA - produttori di tessuto - <http://www.furpileidea.it/sostenibilita/>
12. ILARIA MANIFATTURA LANE SRL - produttori di filato - <http://www.ilaria.it/detox.php>
13. INDUSTRIA ITALIANA FILATI SPA - produttori di filato - <http://www.industriaitalianafilati.it/it/azienda.html>
14. JERSEY MODE SPA - nobilitazione tessuti - http://www.jerseymode.it/jm_sostenibilita.html
15. LANIFICIO BELLUCCI SPA - produttori di tessuto - <http://www.lanificiobellucci.com/ecofabrics.php>
16. LANIFICIO DELL'OLIVO SPA - produttori di filato - <http://www.lanificiodellolivo.com/UK/ambiente.php>
17. LANIFICIO EUROPA SAS - produttore di tessuti - <http://www.laneuropa.it/il-gruppo/Impegno-Detox.aspx>
18. MANIFATTURA EMMETEX SPA - produttore di tessuti - <http://www.emmetex.com/detox.html>
19. MARINI INDUSTRIE SPA - produttori di tessuto - <http://www.marini-industrie.it/responsabilita-dimpresa/>
20. NEW MILL SPA - produttore di filati - <http://www.newmill.it/struttura.htm>
21. PECCI FILATI SPA - produttori di filato - <http://www.pecci1884.it/sostenibilita-pf-3/>
22. PROGETTO LANA SRL - materie tessili di base - <http://www.progettolana.com/web/index.php?page=news>
23. TEXMODA TESSUTI SRL - produttore di tessuti - www.texmodatessuti.com
24. TINTORIA BIAGIOLI MODESTO SRL - tintoria filati - <http://www.filatibiagioli.it/it/impegno-detox.asp>
25. TINTORIA ALESSANDRINI SRL – nobilitazione filati - <http://www.tintoria-alessandrini.com/detox.html>
26. TINTORIA COMETA SRL – nobilitazione filati – <http://www.tintoriacometa.it/progetto-detox.htm>
27. TINTORIA FIORDILUCE SRL- nobilitazione filati - <http://www.fiordiluce.it/detox/>

In this publication there is a full report (aggregate data – total sum) in which the presence of APEOS is considered positive when value is above MRSL limit (1mg/kg)







Measure to improve quality and conclusions

As noticed from previous graphs, APEOS presence is constantly decrease, expecially in last year.

This is probably mainly due to a progressive substitution of APEOS with equivalent product in many part of the world (China, Australia) for raw material washing treatments. Detox committed companies of Prato District still continue in monitoring this parameter in order to evaluate any critical topics and start efficient improving measurements.