

ANALYSIS OF CHEMICAL RESIDUES IN RAW COTTON



Phenol

acc. to Oeko-Tex® Standard 100

Growth	Date of Analysis	Monochlorphenol		Dichlorphenol		Trichlorphenol		Tetrachlorphenol		Pentachlorphenol		Ortho-Phenylphenol	
		I 0.5	II-IV 1.0	I 0.5	II-IV 1.0	I 0.2	II-IV 1.0	I 0.05	II-IV 0.25	I 0.05	II-IV 0.25	I 10	II-IV 10
	Product Class Limit Value (mg/kg)												
Argentina	2020 - September 01	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	1992 - November 24	-		-		-		-		n.d.		-	
Benin	2020 - September 01	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
Brazil	2020 - September 01	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2018 - August 17	n.d.		n.d.		n.d.		n.d.		0.02		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
Burkina Faso	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
Cameroon	2018 - August 17	n.d.		n.d.		n.d.		n.d.		0.01		n.d.	
Chad	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
	1998 - February 26	-		-		-		-		n.d.		-	
	1996 - October 30	-		-		-		-		n.d.		-	
	1992 - November 24	-		-		-		-		n.d.		-	
China	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
Egypt	2020 - December 17 (Giza 96)	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26 (Giza 88)	-		-		n.d.		n.d.		n.d.		n.d.	
	1994 - February 15 (Giza 70)	-		-		-		-		n.d.		-	
	1993 - August 06 (Giza 70)	-		-		-		-		n.d.		-	

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		I 0.5	II-IV 1.0	I 0.5	II-IV 1.0	I 0.2	II-IV 1.0	I 0.05	II-IV 0.25	I 0.05	II-IV 0.25	I 10	II-IV 10
	Product Class												
	Limit Value (mg/kg)												
Greece	2020 - September 01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2018 - August 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2015 - September 18	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2013 - June 26	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-
India	2020 - December 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2018 - August 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2015 - September 18	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2013 - June 26	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Israel	2021 - September 15 (Pima)	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.	n.n.
	2018 - August 17 (Acalpi)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.02	n.d.	n.d.	n.d.
	2015 - September 18 (Acalpi)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2015 - September 18 (Pima)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2013 - June 26 (Acalpi + Pima)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1993 - August 06 (Pima)	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-
Ivory Coast	2020 - September 01	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2018 - August 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1996 - October 30	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-

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		I 0.5	II-IV 1.0	I 0.5	II-IV 1.0	I 0.2	II-IV 1.0	I 0.05	II-IV 0.25	I 0.05	II-IV 0.25	I 10	II-IV 10
	Product Class Limit Value (mg/kg)												
Kazakhstan	2020 - December 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
Mali	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	1996 - October 30	-		-		-		-		n.d.		-	
Pakistan	2021 - July 12	0,01		n.d.		n.d.		n.d.		n.d.		n.d.	
	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
Paraguay	1996 - October 30	-		-		-		-		n.d.		-	
	1992 - November 24	-		-		-		-		n.d.		-	
Peru	1993 - August 06 (Pima)	-		-		-		-		n.d.		-	
Senegal	1996 - October 30	-		-		-		-		n.d.		-	
Spain	2020 - September 01	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2015 - September 18	-		-		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26	-		-		n.d.		n.d.		n.d.		n.d.	
Sudan	2018 - August 17	n.d.		n.d.		n.d.		n.d.		n.d.		n.d.	
	2013 - June 26 (Barakat)	-		-		n.d.		n.d.		n.d.		n.d.	

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		I 0.5	II-IV 1.0	I 0.5	II-IV 1.0	I 0.2	II-IV 1.0	I 0.05	II-IV 0.25	I 0.05	II-IV 0.25	I 10	II-IV 10
	Product Class Limit Value (mg/kg)												
Syria	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-
Tajikistan	2015 - September 18	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2013 - June 26	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Turkey	2021 - July 12	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2018 - August 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1996 - October 30 (rgd.)	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-
Turkmenistan	2018 - August 17	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1996 - October 30	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	-	-	-
USA	2020 - December 17 (Pima)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2020 - September 01 (Upland)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2018 - August 17 (EMOT)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2015 - September 18 (EMOT)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2015 - September 18 (Pima)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	2013 - June 26 (ME + Pima)	-	-	-	-	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
	1998 - February 26 (El Paso 1517)	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1996 - October 30 (Texas)	-	-	-	-	-	-	-	-	n.d.	-	-	-
	1996 - October 30 (Pima)	-	-	-	-	-	-	-	-	n.d.	-	-	-
1993 - August 06 (Pima)	-	-	-	-	-	-	-	-	n.d.	-	-	-	

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Growth	Date of Analysis	Monochlorphenol		Dichlorphenol		Trichlorphenol		Tetrachlorphenol		Pentachlorphenol		Ortho-Phenylphenol	
		I	II-IV	I	II-IV	I	II-IV	I	II-IV	I	II-IV	I	II-IV
Product Class Limit Value (mg/kg)		0.5	1.0	0.5	1.0	0.2	1.0	0.05	0.25	0.05	0.25	10	10
Uzbekistan	1996 - October 30	-	-	-	-	-	-	-	-	n.d.	n.d.	-	-
	1992 - November 24	-	-	-	-	-	-	-	-	n.d.	n.d.	-	-
Zimbabwe	1996 - October 30	-	-	-	-	-	-	-	-	n.d.	n.d.	-	-
2020:	Dectection limit Monochlorphenol, Dichlorphenol, Trichlorphenol, Tetrachlorphenol, Pentachlorphenol 0,01 mg/kg (ppm); Ortho-Phenylphenol 2,00 mg/kg (ppm). No limit value for Tetrachlorphenol, Trichlorphenol and Ortho-Phenylphenol for raw cotton fibers according to decision 2009/567/EC of the European Commission. Measurement Method: Solvent extraction; derivatization; detection by GC-MS/MS.												
2018:	Dectection limit Pentachlorphenol, Tetrachlorphenol, Trichlorphenol 0,01 mg/kg (ppm); Monochlorphenol, Dichlorphenol 0,05 mg/kg (ppm); Ortho-Phenylphenol 2,00 mg/kg (ppm). No limit value for Tetrachlorphenol, Trichlorphenol and Ortho-Phenylphenol for raw cotton fibers according to decision 2009/567/EC of the European Commission. Measurement Method: Solvent extraction; derivatization; detection by GC-MS/MS.												
2015 + 2013:	Detection limit Pentachlorphenol, Tetrachlorphenol, Trichlorphenol 0,03 mg/kg (ppm); Ortho-Phenylphenol 0,05 mg/kg (ppm). No limit value for Trichlorphenol according to Oeko-Tex® Standard 100. No limit value for Tetrachlorphenol, Trichlorphenol and Ortho-Phenylphenol for raw cotton fibers according to decision 2009/567/EC of the European Commission. The quantitative determination of the content of phenol was done by means of gas chromatography.												

n.d. = non-detectable