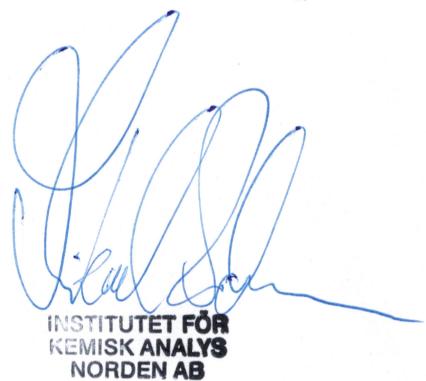

Results

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Material analysis

Order No: 9356372



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Order No: 9356372

Received: 2012-12-30

Completed: 2013-01-10

Materials - Sample list

Sample No	Type of material and area of use	Work-up procedure
9356372-1	ZINGA	Heating with hot air gun to ca 300 - 400 °c

Table of samples received by the laboratory.

Sampling method:

Type of sample: material, in order to analyse isocyanates and / or isocyanate related substances.

Analysis method:

Analysed by using: Gas Chromatography - Mass Spectrometry (GC - MS - CI-) or Liquid Chromatography - Mass Spectrometry (LC - MS - MS - ES+).

For details concerning sampling method and analysis method: See references 1 - 7.

Order No: 9356372**Received:** 2012-12-30**Completed:** 2013-01-10**Analysis of isocyanates in material**

Sample No	2.4 - TDI	2.6 - TDI	4.4' - MDI	IPDI	HDI	PHI	MIC	EIC	PIC	ICA
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Table of contents of isocyanates in material. (X = presence is confirmed, - = presence is not confirmed)**Abbreviations:**

2.4 - TDI	2.4 - Toluene diisocyanate	IPDI	Isophorone diisocyanate	MIC	Methyl isocyanate	ICA	Isocyanic acid
2.6 - TDI	2.6 - Toluene diisocyanate	HDI	Hexamethylene diisocyanate	EIC	Ethyl isocyanate		
4.4' - MDI	4.4' - Methylenediphenyl diisocyanate	PHI	Phenyl isocyanate	PIC	Propyl isocyanate		

Isocyanates in material - References

1. Arbete och Hälsa 2000:23. Jan-Olof Levin (red). Principer och metoder för provtagning och analys av ämnen på listan över hygieniska gränsvärden.
(Work and Health 2000:23. Jan-Olof Levin (ed). Principles and methods for the sampling and analysis of substances in the list of hygienic values)
2. Tinnerberg H, Karlsson D, Dalene M and Skarping G (1997). Determination of toluene diisocyanate in air using di-n-butylamine and 9-N-methylaminomethyl-antracene as derivatization reagents. *J Liq Chrom Rel Technol* 20:2207-2219.
3. Tinnerberg H, Spanne M, Dalene M and Skarping G (1996). Determination of complex mixtures of airborne isocyanates and amines. Part 2. Toluene diisocyanate and aminoisocyanate and toluenediamine after thermal degradation of a toluene diisocyanate-polyurethane. *Analyst* 121:1101-1106.
4. Tinnerberg H, Spanne M, Dalene M and Skarping G (1997). Determination of complex mixtures of airborne isocyanates and amines. Part 3. Methylenediphenyl diisocyanate, methylene-diphenylamino isocyanate and methylenediphenyldiamine and structural analogues after thermal degradation of polyurethane. *Analyst* 122:275-278.
5. Karlsson D, Spanne M, Dalene M and Skarping G (1998). Determination of complex mixtures of airborne isocyanates and amines. Part 4. Determination of aliphatic isocyanates as dibutylamine derivatives using liquid chromatography and mass spectrometry. *Analyst* 123:117-123.
6. Karlsson D, Dalene M and Skarping G (1998). Determination of complex mixtures of airborne isocyanates and amines. Part 5. Determination of low molecular weight aliphatic isocyanates as dibutylamine derivatives. *Analyst* 123:1507-1512.
7. Karlsson D, Spanne M, Dalene M and Skarping G (2000). Airborne thermal degradation products of polyurethane coatings in car repair shops. *J Environ Monit* 2, 462 – 469.