

Business Activity of Fuji Denka Research and Analysis Center Co., Ltd.

Fuji Denka Research and Analysis Center is a total environmental research and analysis company established 30 years ago. Fully utilizing the analyzing and environmental investigation technology, the company is actively involved in protection of local and corporate environment. It serves customers by providing pollution prevention on soils and underground water, investigation and proposal on eco-friendly products, and investigation for sick-house inducing agents.

Total Pollution Investigation of Soils and Underground Water

Fuji Denka was appointed as a designated research and investigation institute from the Minister of Environment in February 2003, based on the Soil Contamination Measures Law under the license number 2003-1-184. It provides an integrated research and investigation service from investigating the quality of soil and underground water including the concentration of volatile organic compounds, heavy metals and agricultural agents to advising assessments and measures against them, based on its abundant experiences in this field. The assessment items covered include Phase 1 to Phase 3 as shown in the table below.

Investigation and Countermeasures against Soil and Underground Water Contaminations

Item	Phase 1 (Investigation by Data)	Phase 2 (Conditions and Detailed Investigation)	Phase 3 (Purification)
Outline	Possibility of pollution of the land is investigated by examining how it has been used.	Condition of pollution of the land is investigated.	Based on the investigations in Phase 1 and 2, contaminants are removed from the soil and underground water in the best suitable way.
Investigation and purification methods	<ul style="list-style-type: none"> Investigation of the land usage in the past ① Old maps and aerial photos ② Acquisition of the land register ③ Interviews Investigation of the peripheral area ① Condition of underground water contamination ② Geographical investigation, etc. 	<ul style="list-style-type: none"> Soil gas investigation Surface investigation for heavy metals, etc. Surface investigation for agricultural agent, etc. Boring investigation Underground water investigation Simulation analysis 	<ul style="list-style-type: none"> Soil Vapor Extraction (SVE) Groundwater pumping and aeration Lime mixing method Reactive water retaining wall Removal of soil by digging, etc.

Measurement of VOC Evaporation from Products

Many buildings recently built such as houses and school buildings are highly air-tight and heat-insulated to enhance living comfort and energy-saving performances. However, this is partly a cause of sick house syndrome, which allegedly occur due to a certain chemical substances emitted from building materials, interior materials and furniture.

Fuji Denka has long provided measurement of sick house inducing substances in rooms of newly built houses, flats and offices. In order to respond to the needs of measuring those substances emitted from office equipment and materials, Fuji Denka introduced in June 2005 a chamber-type VOC emission measuring and analyzing equipment. This equipment has a chamber of 20ℓ and 1,000ℓ that can be applied to the size of the subject for measurement and VOCs emitted from IT equipment such as a personal computer and home electrical appliances to furniture and office automation equipment can be measured using the measuring equipment.

Subject substances

- VOC (volatile organic compounds) • Formaldehyde • Toluene
- Xylene • Styrene • Others

Investigation of Hazardous Chemical Substances for Green Procurement

In order to manufacture an eco-friendly product, it is essential to measure the content of hazardous chemical substances contained in the parts and materials.

Based on the EU Directives of WEEE and RoHS, Fuji Denka provides analysis of hazardous chemical substances contained in an electric and electronic apparatus and compliance to ELV.

Subject hazardous substances

- Cadmium • Mercury • Lead • Hexavalent chromium
- PBB • PBDE



Gas chromatography mass spectrometer



VOC emission measurement chamber (1,000 L)
(VOC-10) Made by Espec Corporation



ICP analyzing machine

Business lines:

- Environmental analysis and measurement, Environmental assessment (Analysis of air, water, noise, vibration, odor and soil contamination level, and measurement of work environment)
- Investigation and removal of soil and underground water contaminants
- Material analysis and reliability tests, calibration of measuring devices
- Measurement of sick house causing substances and VOC emission measurement

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