TrisKem International

S. Happel,
LSC 2010
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TrisKem International

- Based in Rennes (France)
- Independent company since 02/07
  - Formerly part of Eichrom Europe
- Production and trade of extraction chromatographic resins for Europe, Russia, Africa, Middle-East and China
- Interest also in other separation techniques
- All activities under ISO 9001:
  - Sales and trade of laboratory consumables
  - Production
  - Technical support
  - R&D
### Products

<table>
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<tr>
<th>Products</th>
<th>Applications*</th>
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<td>Accessories</td>
<td>Accessories for columns and cartridges</td>
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<tr>
<td>Resolve™ Filters</td>
<td>Preparation for sources for alpha spectrometry</td>
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<td>Stainless steel discs</td>
<td>Electrodeposition</td>
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<td>Ag and Ni discs</td>
<td>Po autodeposition</td>
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<td>Actinide Resin</td>
<td>Actinides and transition metals</td>
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<tr>
<td>DGA Resin</td>
<td>Analytical grade ion exchange resin</td>
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<td>Diphonix® Resin</td>
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<td>Ion Exchange Resins</td>
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<td>Ln Resin</td>
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<td>MnO₂ Resin</td>
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<td>Nickel Resin</td>
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<td>Pb Resin</td>
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<td>Pre-Filter Resin</td>
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<td>RE Resin</td>
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<td>Sr Resin</td>
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<td>TEVA® Resin</td>
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<td>Tritium Column</td>
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<td>TRU Resin</td>
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<tr>
<td>UTEVA® Resin</td>
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</tbody>
</table>

*Main applications are shown in **bold**

- **Sample prep for alpha spectrometry**
- **Analytical grade anion, cation and chelating ion exchange resins**
Extraction chromatography

- Organic extractant coated on inert support
  - « Supported solvent extraction »

- Easy handling
  - Chromatography
  - Columns, cartridges or filters
  - Small rinse/elution volumes

- Fast kinetics
  - High flowrates

- High extractant load
  - High capacity
Extraction chromatography

Selectivity of solvent extraction
- Wide choice of different extractants/selectivities
  - Acidic extractants (e.g. HDEDP)
  - Amines and ammonium salts (e.g. Aliquat 336)
  - Solvating and chelating extractants, especially P=O group containing (e.g. CMPO, TBP)
  - Crownethers
- Selectivity adaptable to separation problem
- Rather easy to introduce new selectivities

Use of several resins for complex separation problems

Selectivity adaptable to separation problem
- Rather easy to introduce new selectivities

Use of several resins for complex separation problems
<table>
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<tr>
<th>Extractant</th>
<th>Resin</th>
<th>Applications</th>
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<tr>
<td>DTCH18C6/octanol</td>
<td>SR</td>
<td>Strontium</td>
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<tr>
<td>DTCH18C6/isodecanol</td>
<td>PB</td>
<td>Lead and polonium</td>
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<tr>
<td>CMPO/TBP</td>
<td>TRU</td>
<td>Actinides, Am</td>
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<tr>
<td>Aliquat 336</td>
<td>RE</td>
<td>Rare Earth Elements</td>
</tr>
<tr>
<td>DPPP</td>
<td>TEVA</td>
<td>Actinides (IV) and Tc</td>
</tr>
<tr>
<td>Dipex</td>
<td>UTEVA</td>
<td>Uranium (VI)</td>
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<tr>
<td>HDEHP</td>
<td></td>
<td>Total alpha, Be</td>
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<tr>
<td>DMG</td>
<td>LN</td>
<td>Lanthanides, Ac</td>
</tr>
<tr>
<td>DGA (Normal &amp; Branched)</td>
<td>NI</td>
<td>Nickel</td>
</tr>
<tr>
<td></td>
<td>DGA</td>
<td>Actinides, Am, Ac</td>
</tr>
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</table>
Methods

- Sr-90 environmental and bioassay samples
- Pb-210 in soil and water
- Actinides in environmental and bioassay samples
- Fe-55 in aqueous samples
- Ni-63/59 in aqueous samples
- Tc-99 in soil, urine and water
- H-3 in aqueous samples
- Ra-226/8 in water
- ...

- In work: methods in German, French and Russian
- Product sheets in Russian
On-going projects

- CI resin for Cl/I separation
- PGE separation
- Cu resin (for use in Cu isotope production)
- Zr-93 (via UTEVA/TEVA)
  - Future also other long-lived radionuclides relevant for decommissioning and radwaste
- Sn separation (TBP resin, TRU)
- Ga-68 purification
- DGT (Ra, Sr, ACs)
- New cartridges and accessories

Any interesting separation problems very welcome!!!
Distributor / commercial agent for:

- **Meridian Biotechnologies (UK)**
  - Outside of UK
  - Liquid scintillation cocktails and vials
  - Carbon trapping agents for Pyrolyzer/Oxidiser
  - Tissue solubilizers for LSC

- **NucFilm GmbH (Dr. Surbeck, Switzerland)**
  - Outside of Switzerland
  - Ra Discs (MnO$_2$ discs)
  - Diphonix Discs

- **Raddec International (UK)**
  - Outside of UK
  - Pyrolyzer (for H-3, C-14, Cl-36,…)
  - Pyrolyzer consumables
Users Group Meeting 2010

14th of September in Chester (UK)

Best Western Queens Hotel
9.30h – 17.30h

Program available on request and on our website
For further information

➢ **E-mail:**
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➢ **Website:**
  www.triskem-international.com

➢ **Newsletter:**
  TrisKem Infos

➢ **Forum:**
  triskem-international.com/forum_triskem.html
Thank you for your attention!

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