

Dynamic Site Characterization  
Quality Improvement with Geoprobe-system

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Geoprobe system®

**Geoprobe system®** is based on a direct push drilling machine for detailed total site characterization. Ejlskov owns 2 drilling machines and has 9 years of experience with the method. We are leading in Europe with the Geoprobe MIP-system for direct vertical measurements of oil compounds and organic solvents in soil and groundwater.



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Drilling machines



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## Dynamic Site Characterization at Motala

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- Risk areas were identified on behalf of historic research
- Investigate the risk areas using the MIP-system
- Adapt the strategy using the MIP-profiles
- Define depth and zones of sampling of soil and groundwater
- Only sample necessary samples for documentation of contamination
- Perform relevant field tests (slugtest, field analysis)
- Go home with the adequate data for clear conclusions and decisions

*The foundation of quality is made in the field.*

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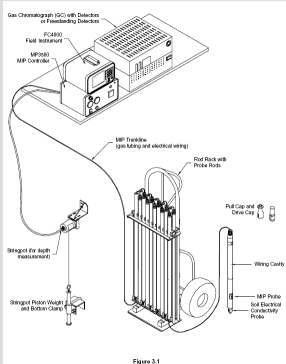
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## MIP-System

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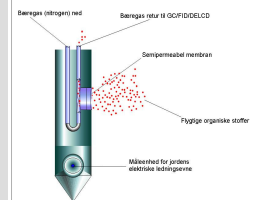
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## MIP-Systemet

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### Principskitse af MIP-målesonde



Flygtige organiske stoffer diffunderer gennem membranen og transporteres af en bæregas fra sonden til terræn gennem tynde teflon slanger.

Stoffene detekteres i en kolonnefri GC med 3 detektorer FID, PID og DELCD. Herved bestemmes den relative mængde af stoffer i forhold til den aktuelle baggrund.

MIP-systemet er ikke beregnet til at kvantificere det eksakte indhold af en given forurening. Afgørelsen herpå er at stofindholdet, der diffunderer gennem membranen er afhængig af jorden, fugtigheden, kernen og temperaturen på sonden. Til kvantificering skal anvendes specifik prøvetagning af poruløst jord eller grundvand. Det er disse nøje udvalgte prøver, der sammen med MIP-målingerne danner grundlaget for de endelige beslutninger.



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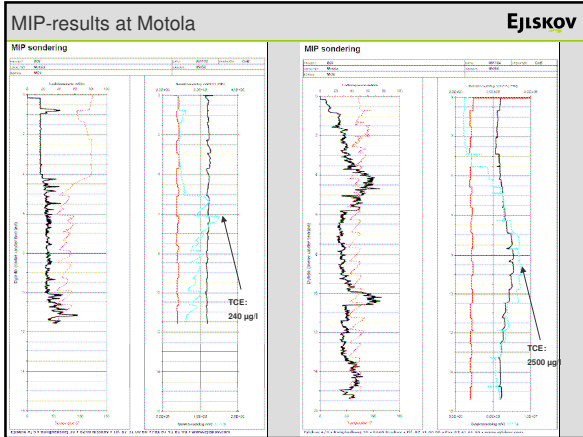
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### Sampling

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- With the Geoprobe-system discrete sampling can be used;
  - Soil sampling in unsaturated and saturated zone
  - Soil gas
  - Groundwater

Soil samples

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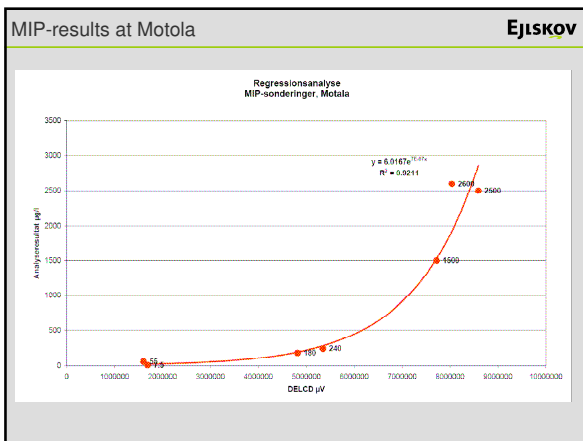
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Advantages

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- Fast and flexible
- Minimizes number of samples
- Minimizes number monitoring wells
- Minimizes time of investigation
- No extra mobilizations
- Minimizes field damages
- Secure adequate field data and sampling to take clear conclusions on site characterization.
- Makes choice of remediation method easier
- Higher quality to equal or lesser price

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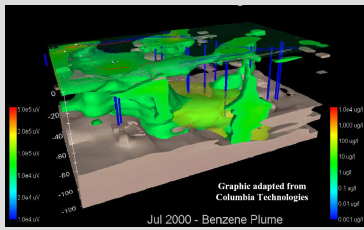
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EJLSKOV

Wishfull thinking or reality?



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