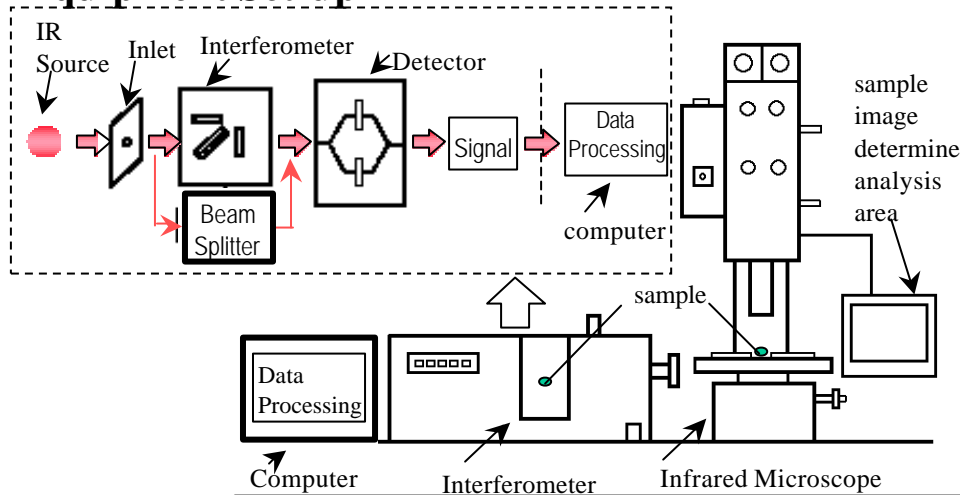
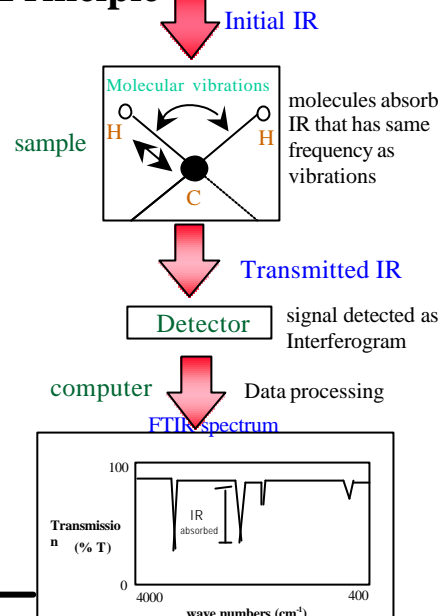


## ● Principle ~ Setup

### Equipment Set-up



### Principle



## ● Equipment Capability

| Capability<br>Type of Analysis | Information  | Sample size limit   | Analysing Technique  |
|--------------------------------|--|---|--|
| <b>FTIR</b>                    | Identify types of functional groups in organic materials | Solids, liquids: 1 $\mu\text{g}$<br>gaseous : a few ppm         | Transmittance, Reflectance<br>Total Reflectance - ATR<br>Reflection Absorption |
| <b>FTIR<br/>Microscope</b>     | (Chemical structure of samples)                          | Solids, liquids:<br>$\sim 30 \mu\text{m} \times 30 \mu\text{m}$ | Transmittance<br>Reflectance<br>Micro-ATR                                      |

## ● Analysing examples

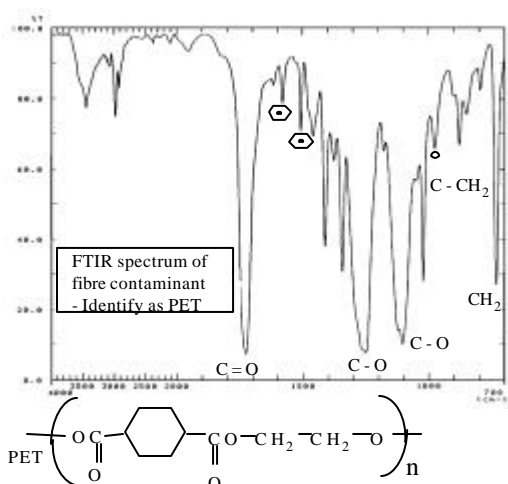
1) Identify contaminant on Micro-switch (FTIR Microscope)

<Sample Preparation>

Fibre contaminant  $\rightarrow$  Melt press  $\rightarrow$  FTIR Microscope (Transmittance)  
(Melt press contaminant, increase surface area, higher % Transmittance)

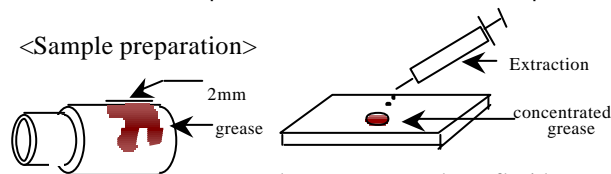
<Results>

Image of fibre contaminant



2) Identify unknown grease coated on Rotor Part (FTIR Microscope  $\rightarrow$  Reflectance Technique)

<Sample preparation>



Place grease sample on fluoride coated stainless steel plate

