OLIVE OIL PROCESSING COURSE

modern olives

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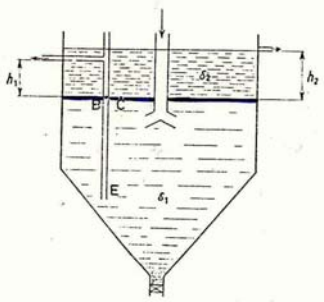
Liquid - Liquid Phase Separation

Centrifugation

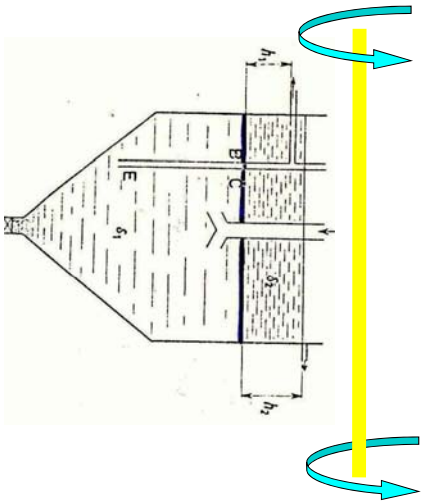
Centrifugation



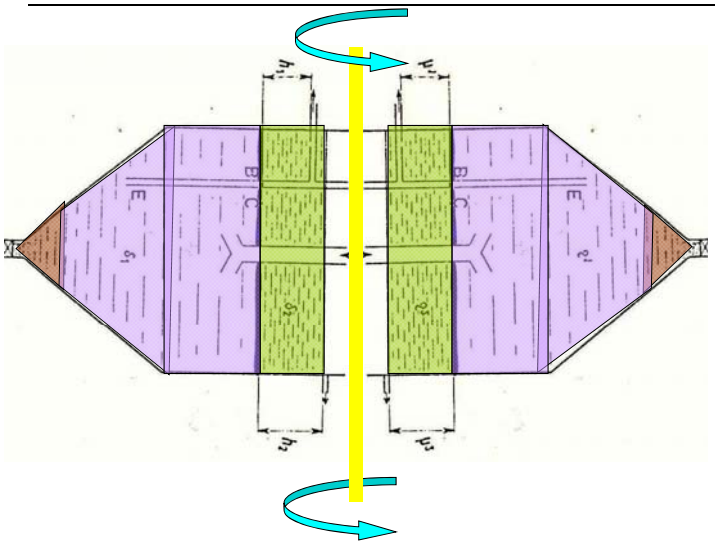
$$h_1 \cdot d_1 = h_2 \cdot d_2$$

$$\frac{h_1}{h_2 - h_1} = \frac{d_2}{d_1 - d_2} = \text{Cte}$$

Centrifugation

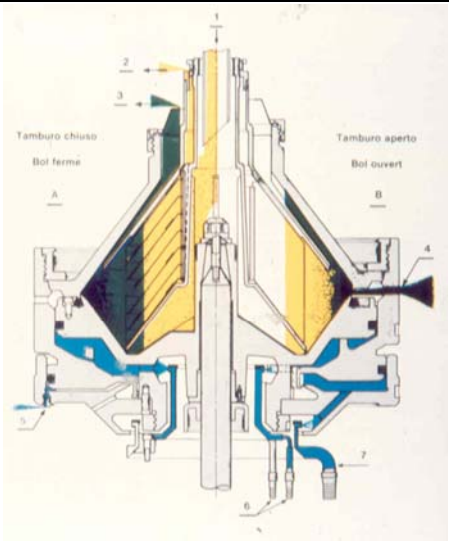


Centrifugation

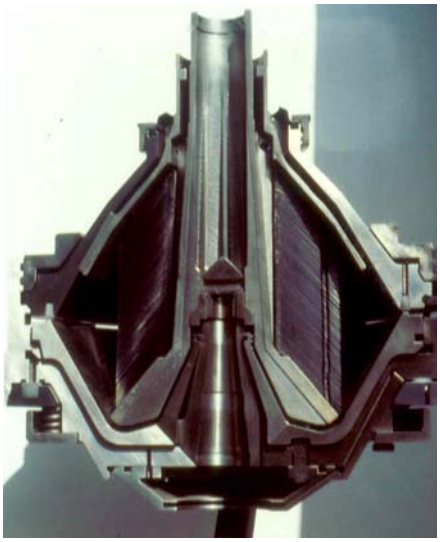


Centrifugation

Centrifugation

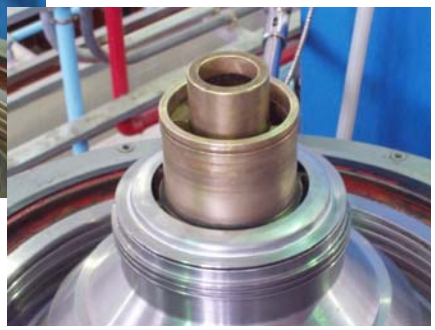


Centrifugation

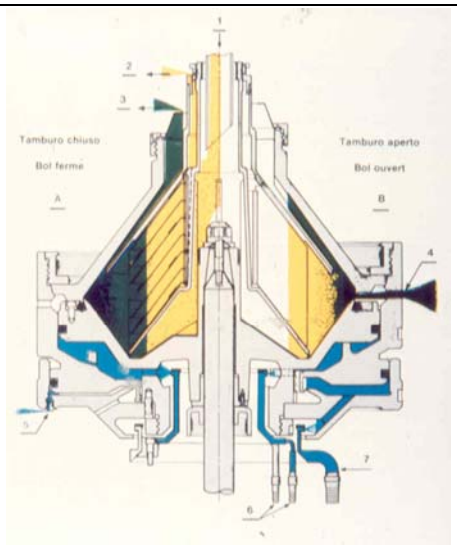


Photos Jose Alba – Australia 2005

Centrifugation



Centrifugation



Centrifugation

Oil in water:

Ideal:	< 0.1%
Unacceptable:	> 0.3%

Water in oil:

Ideal:	< 0.2%
Unacceptable:	> 0.6%

Oil temperature:

Ideal:	1-2ºC higher than malaxing Tº
Unacceptable:	Lower than malaxing Tº.
	> 5ºC higher than malaxing Tº

Centrifugation

- Accurate selection of regulation ring.
- Check oil aspect at all times (Clean milky aspect).
- Check foam aspect at all times (White as soon as it is formed).
- Do not over feed the separator.
- Do not add more than 40% of water/oil.
- Temperature of water between 35-38ºC. Never colder than the oil.
- Constant flow of oil and water.
- Regulate discharge times (1-2 hours).
- Maintain clean all parts.

Centrifugation

Centrifugation

Settling

Settling

- Maintain oil in settling for 24-48 h.
- Drain settlings every two hours.
- Remove foam every six hours.
- Avoid contact with open air or light.
- If we drain more than 1% settlings for total oil produced we have to check the separator.
- Maintain temperature above 18ºC.
- Check acidity and peroxides before sending to final tank.