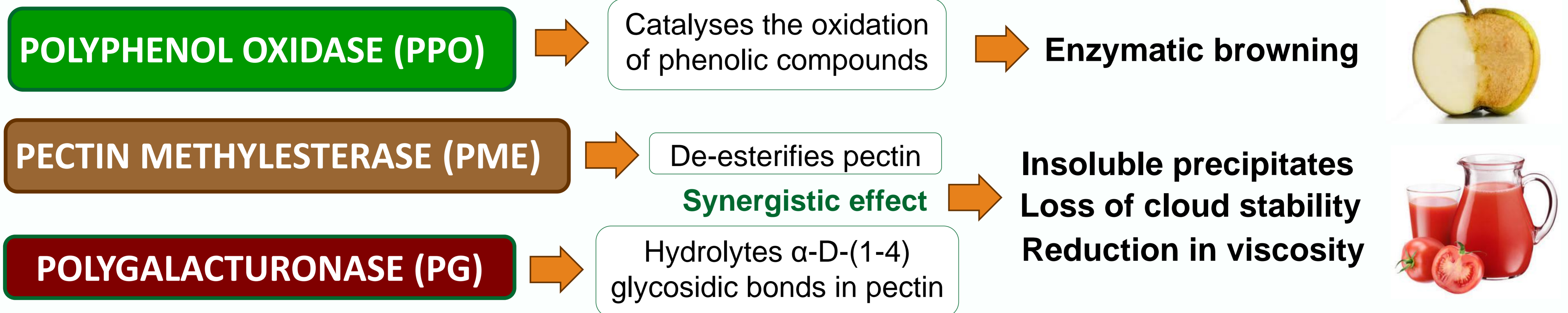
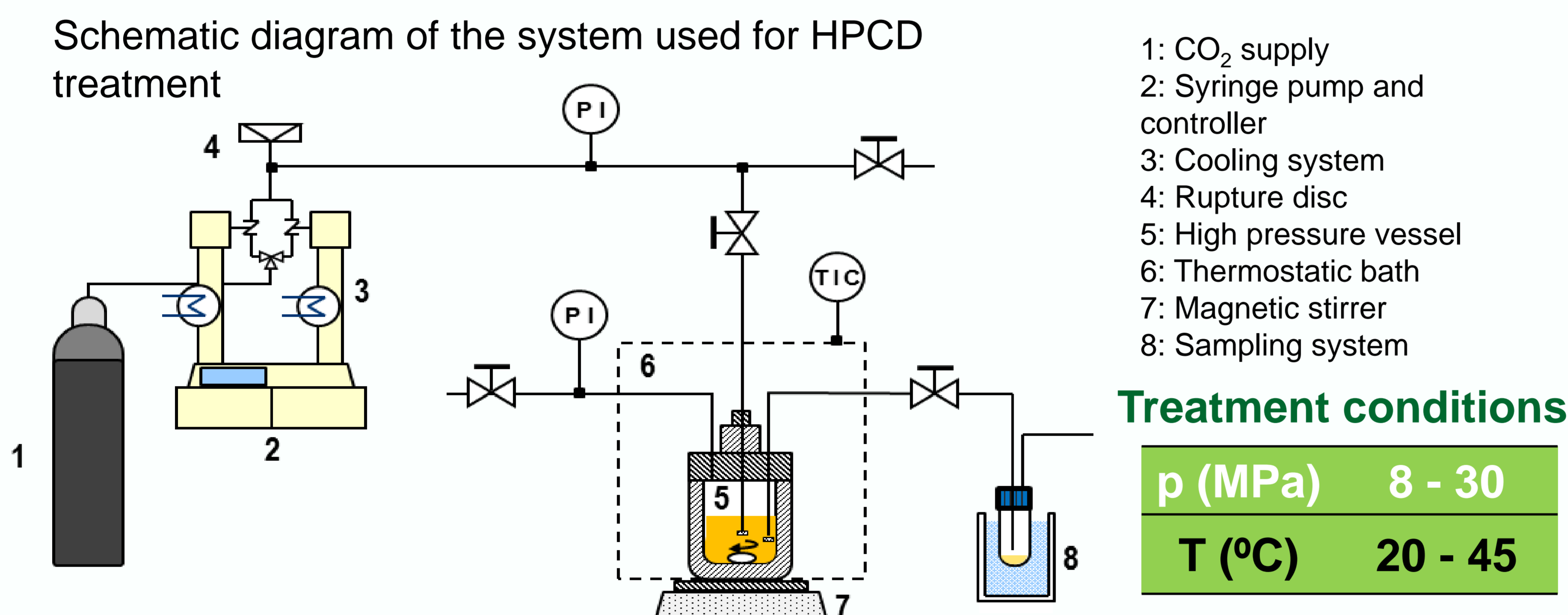


Enzymes of interest in apple and tomato juices



Enzymatic inactivation through HPCD



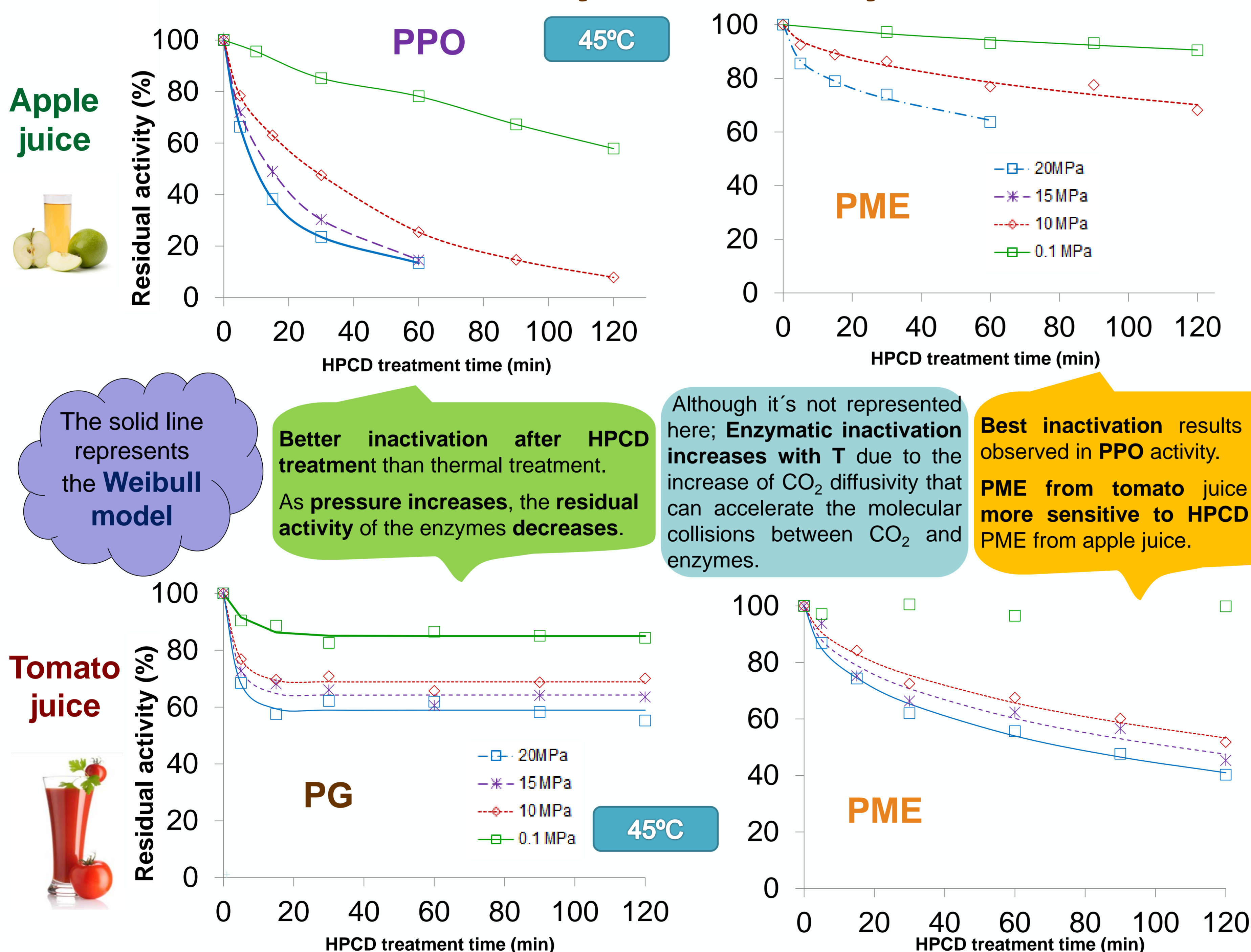
► An alternative to heat treatment

HPCD TECHNOLOGY (High Pressure Carbon Dioxide)

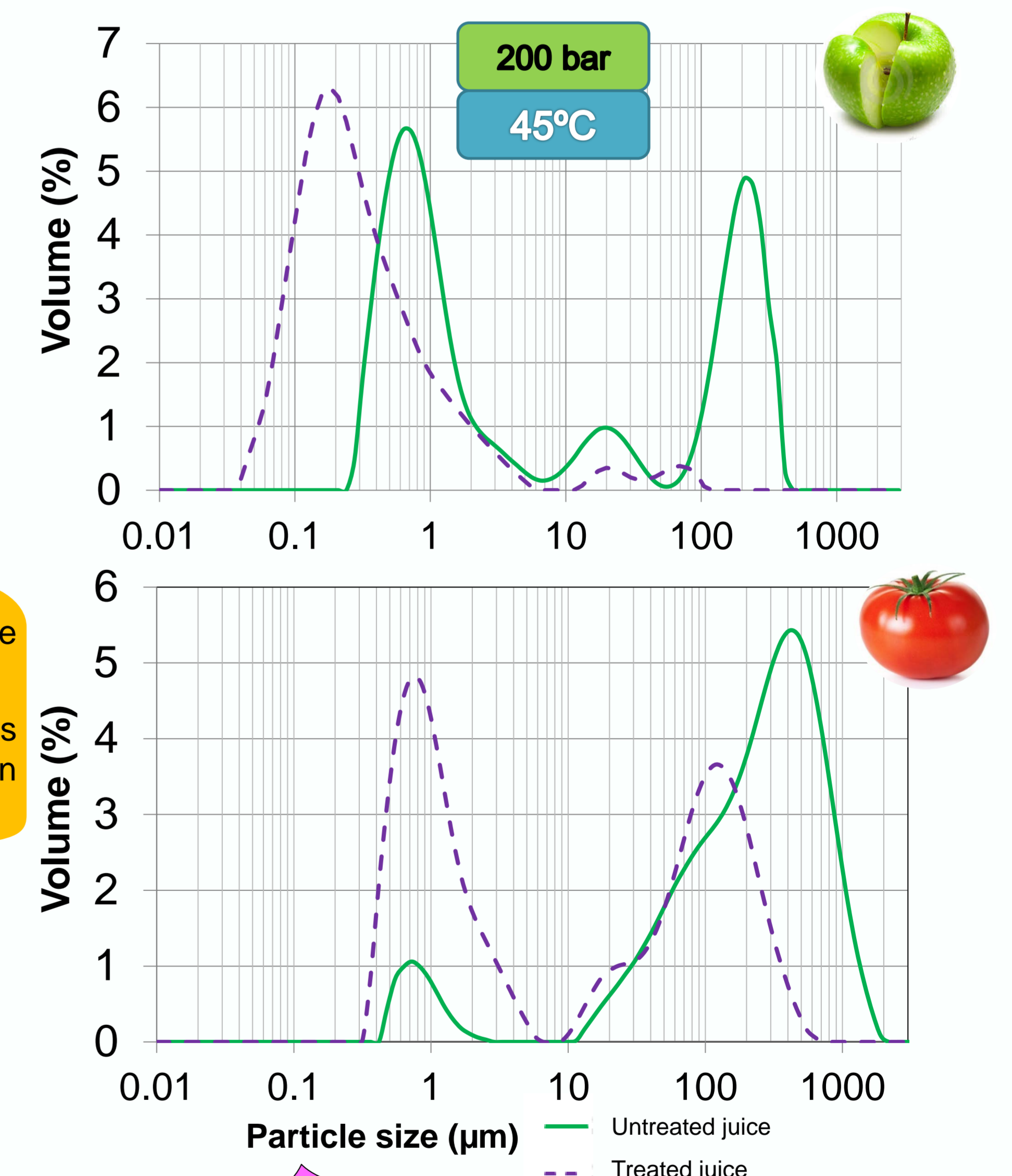
Is SC-CO₂ a green solvent?

- ✓ Nontoxic
- ✓ Nonflammable
- ✓ Readily available
- ✓ Easy to remove from product
- ✓ Renewable
- ✓ Recovered as a by-product

Residual activity of the enzymes



Particle size distribution



There is an increase in the number of smaller particles, while the size of the larger particles decreased, so HPCD seems to favour juice homogenization.

Concluding Remarks

- HPCD technology is a **clean alternative** to traditional heat treatments, and CO₂ can be considered a **green solvent**.
- This technology has demonstrated the **potential of inactivating the main enzymes** responsible for the deterioration of apple and tomato juice.
- HPCD is also capable of **favouring the homogenization of the product**, achieving a product of **higher quality** and better visual appearance, which presents greater appeal to the consumer.

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