Cold stabilisation with potassium polyaspartate

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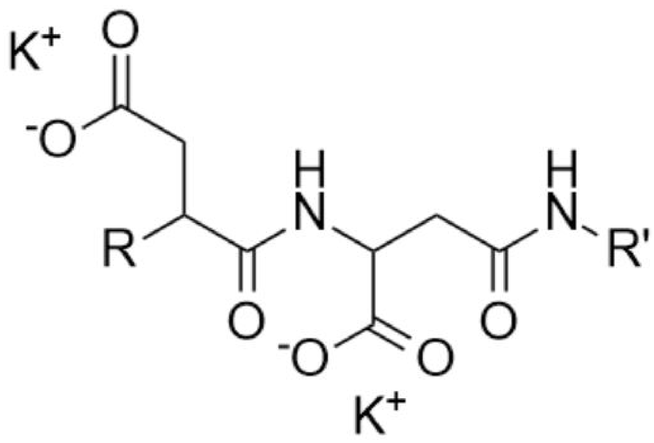
Potassium polyaspartate (KPA) has recently gained approval for use in winemaking from the OIV and FSANZ. It is a crystallisation inhibitor that prevents tartrate crystals from forming in wine rather than removing them via traditional methods such as chilling. Potassium polyaspartate has numerous benefits compared to other additive-based stabilisation methods including:

- no interaction with the colour in red wines
- no impact on the filterability of wines after its addition.

Additive-based methods present a distinct advantage in processing time for wines requiring accelerated market delivery.

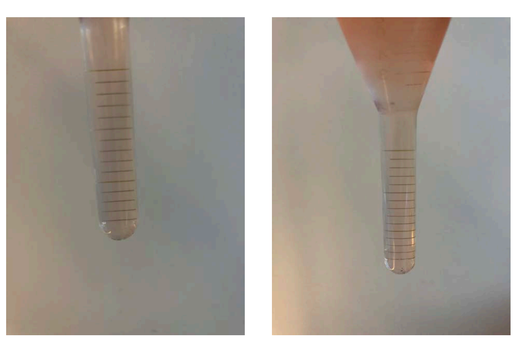


R, R' = additional monomer units

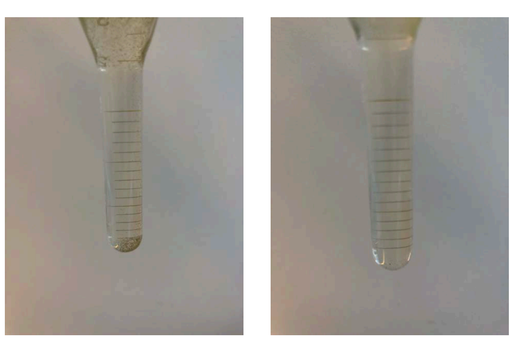
At wine pH, KPA exists in its polyanionic form, allowing it to sequester free potassium ions in wine solutions and inhibit the growth of tartrate crystals.

Polyaspartate protein chains interact with micro-crystal surfaces to hinder and/or delay the growth of crystals.

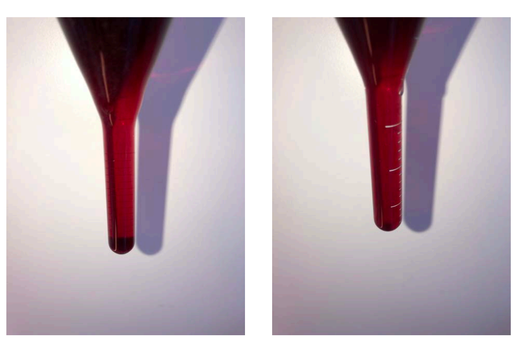
The AWRI is currently undertaking a proof of performance trial on the efficacy of two KPA-based products for treatment of a range of different wine products. Preliminary results indicate that KPA products are effective at improving tartrate stability across different wine styles and offer distinct advantages over traditional tartrate stabilisation methods.



Above:
Cold hold test (3 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of rosé.
Below:
Cold hold test (20 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of rosé.



Above:
Cold hold test (3 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of Chardonnay.
Below:
Cold hold test (20 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of Chardonnay.



Above:
Cold hold test (3 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of Cabernet Sauvignon.
Below:
Cold hold test (20 days, -4°C) showing comparison between untreated control (left flask) and KPA-treated (right flask) samples of Cabernet Sauvignon.