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## Reactive Carbonyl Species as Key Control Point for Optimization of Reaction Flavors

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### Highlights

- Flavor enhancement was demonstrated using reactive carbonyl species (RCS) as a new control point for Maillard reaction
- Acetol was identified as a precursor of 2-acetylpyridine in a glucose/proline Maillard model
- Nine RCS were identified and monitored during Maillard reaction
- RSM was used to optimize RCS for flavor formation in Maillard reaction systems

**Keywords:** Maillard reaction, reaction flavor, 2-acetylpyridine, Reactive Carbonyl Species

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