## A Benchmark for Recipe Understanding in Autonomous Agents

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"Can a machine understand an everyday activity, like cooking, deeply enough for successful execution?"

## **MUHAI Recipe Execution Benchmark**

- Representation language
- Kitchen simulator
- Suite of multiperspective metrics
- Recipe dataset

baking-tray located at counter-top · lined-with: baking-paper · arrangement: side-to-side homogeneous-mixture temperature: 175 °C current-shape: crescent baked: true mixing-type: mixed • amount: 25 g all-purpose-flour sifted: false amount: 10 g white-sugar • temperature: 18 °C amount: 5 g butter temperature: 18 °C amount: 10 g

Gold Standard Dish

**Predicted Dish** cookie-sheet located at counter-top lined-with: baking-paper · arrangement: side-to-side homogeneous-mixture temperature: 175 °C · current-shape: ball baked: true mixing-type: beaten amount: 36.25 g amount: 5 g all-purpose-flour · sifted: false • amount: 13.125 g white-sugar temperature: 18 °C amount: 6.25 q butter temperature: 5 °C amount: 13.125 q

Open Source: <a href="https://ehai.ai.vub.ac.be/recipe-execution-benchmark">https://ehai.ai.vub.ac.be/recipe-execution-benchmark</a>



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