

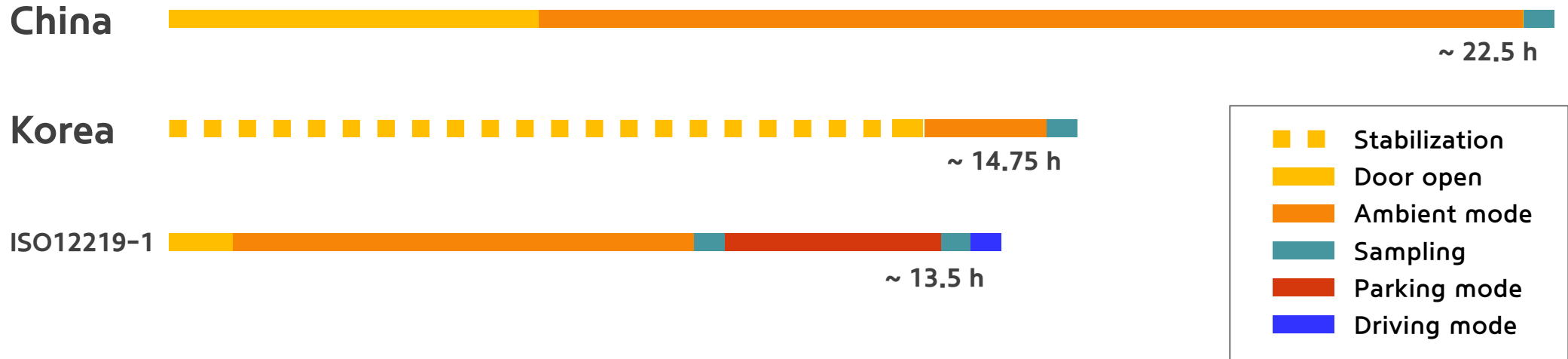
Harmonization of VIAQ Test Methods

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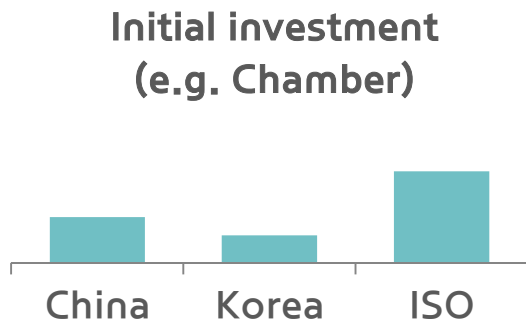
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● Comparison Time of Vehicle Test Methods



● Estimated Cost and Time Consumption

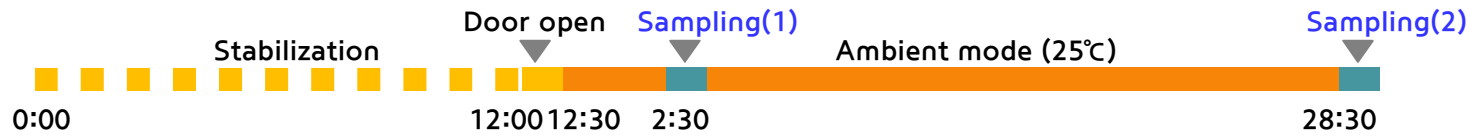


Item	Amounts	Note
Test vehicle	100 car / 1 year	Launched 10 new models (Domestic and overseas)
Time consumption	~ 2,250 h	China criteria

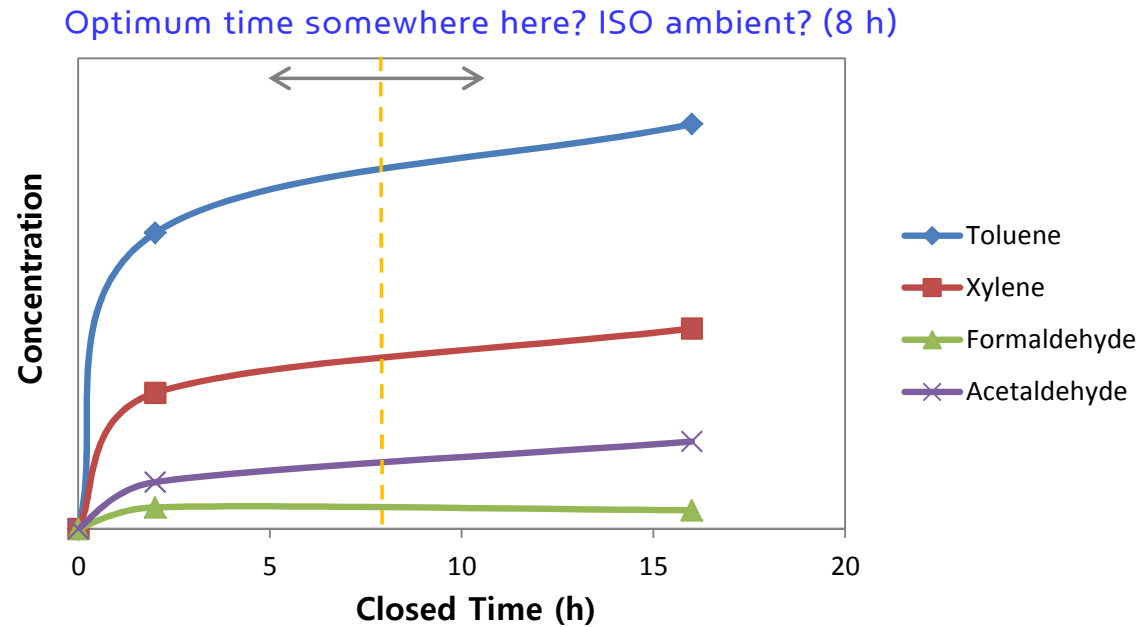
- Due to heating radiator, so on.
- In case of ISO Parking and Driving mode, only a few test labs are equipped with proper chamber.

◆ Optimum Test condition

● Test result from Fused Method of Korea and China



<Comparison of VOC Emissions from 2 samplings>



● Suggestions to build a efficient and reliable test method

1) Optimum testing time

2) Minimize confusion – modify existing method

- Korea and China have own VOCs guideline on “General” condition(ambient mode)

If there are drastic changes(e.g. temp.) on method, guidelines have to reconsidered.

3) Focus on essentials of test condition

- Test vehicle, within certain period after completion of assembly (28 day)

- Temp. and Humidity ($23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$)

- Reasonable stabilization and test time

- Reproducibility

- Well-defined sampling method

Thank you

NEW THINKING. NEW POSSIBILITIES.
 HYUNDAI