

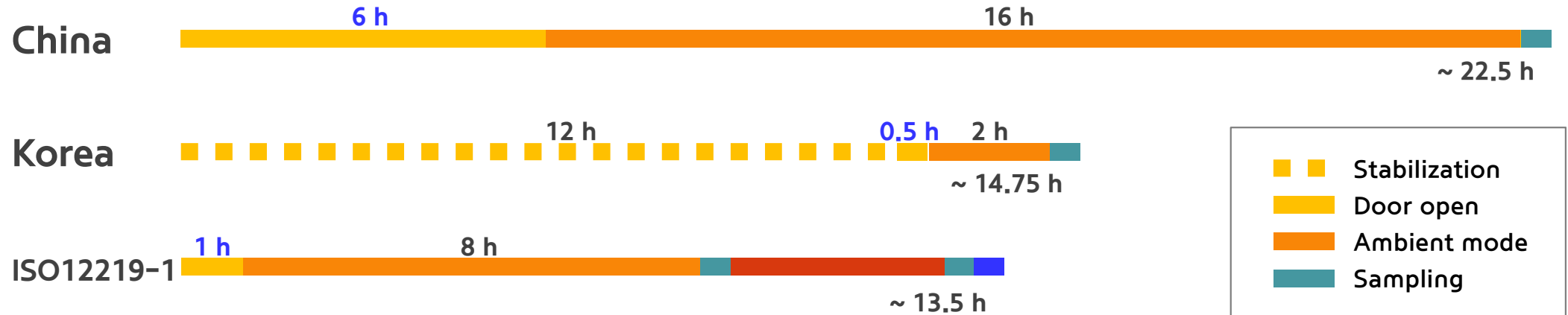
Review of VIAQ Ambient Mode Test

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● Ambient modes in several test methods



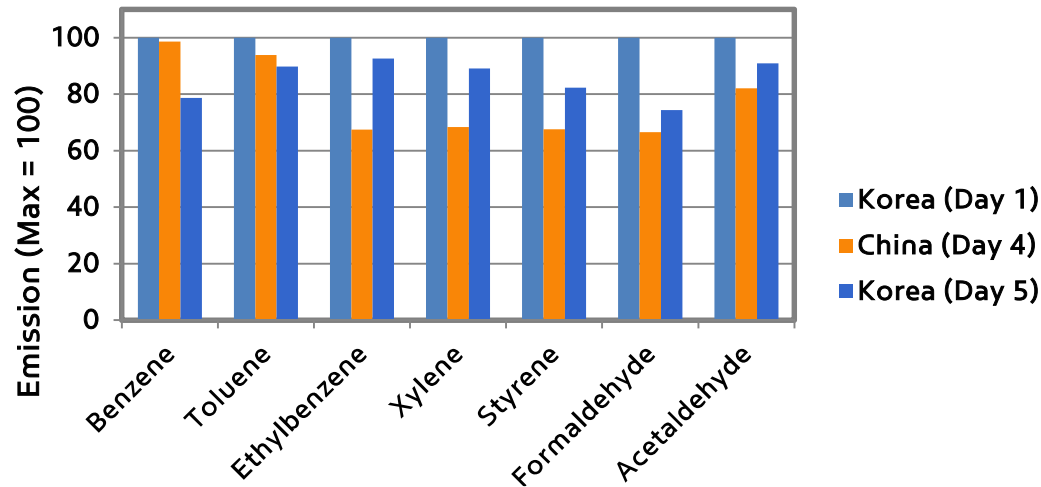
● Korea and China test result can be different

- Effect of ...

- ① Different preconditioning (Door open) time
- ② Different door closed time
- ③ Sampling position (not considered this time)

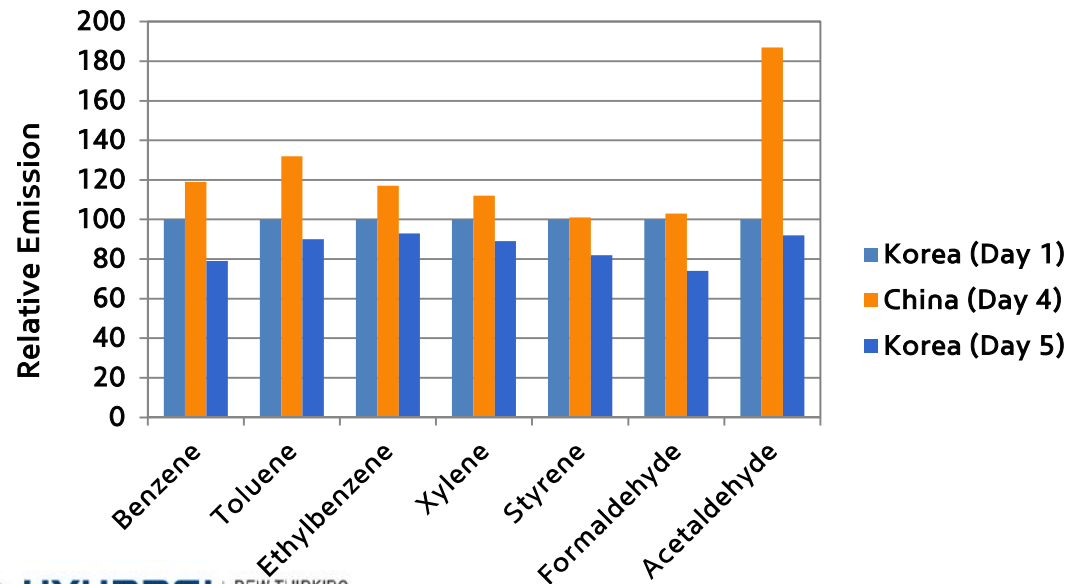
◆ Compared Korean to China test result

Sampling after 2 hours from door closure (25 °C)



- Longer door open time of China method(6 h), Korea and China emissions at 2 hours can differ. (67 ~ 99 %)
- Day 1 vs Day 5(Korean Method) : 74 % ~ 91 %
 - Quiet reproducible within a few days
 - Korean method let take samples twice (2 days)
- Sun exposure or parking mode test may make test vehicle quiet different condition.

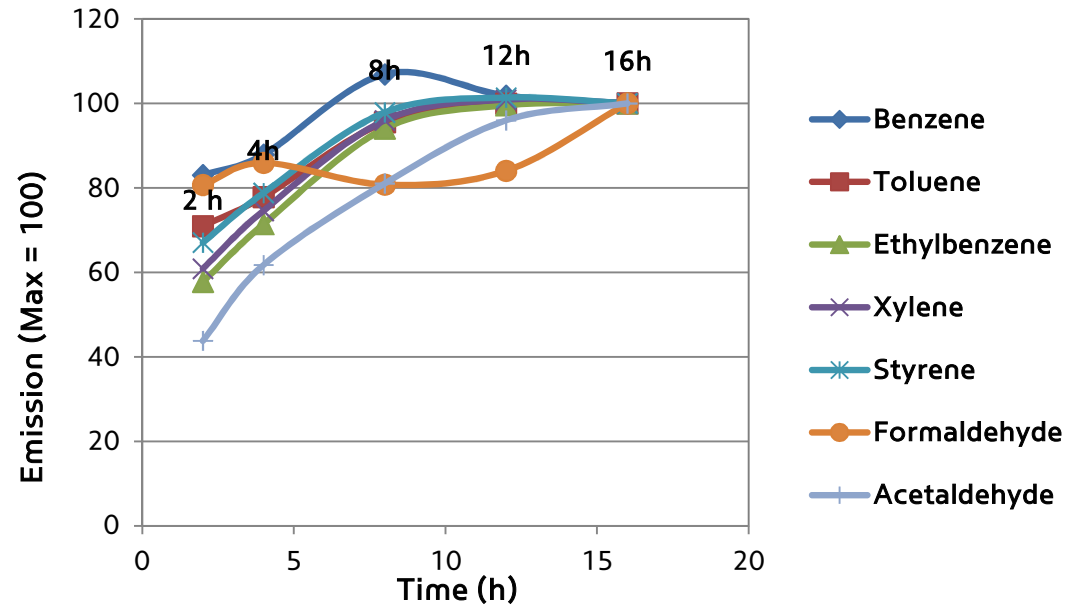
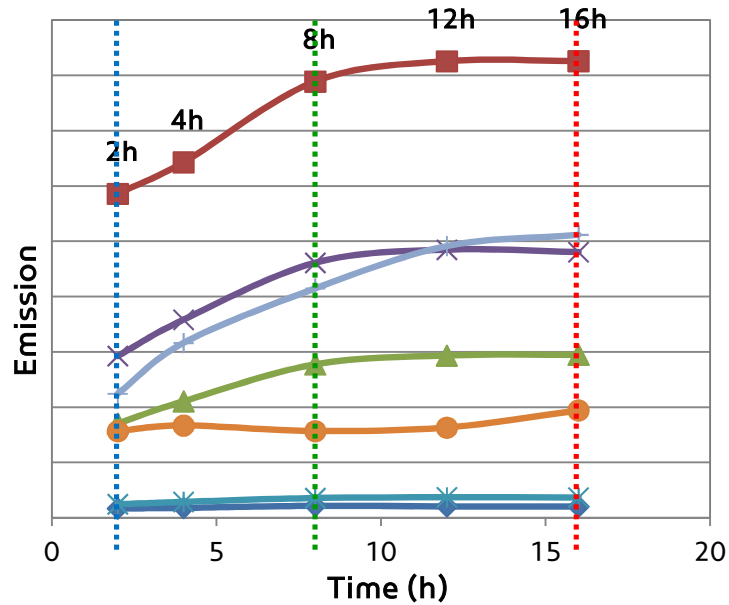
Compared Korea (2 h) to China (16 h) method



- Emissions increase 101~ 187 %
- Acetaldehyde rises sharply.
- Test Vehicle : 32 d after production (Leather Seat)
- Sampling position : Driver's nose
- Benzene, Styrene and Formaldehyde are quiet low level.

◆ Adjust Closed Time Study

● Time study of China method (Day 4)



● Most of compound emission equilibrate after ~ 10 hours

- Test Vehicle : 32 d after production (Leather Seat)
- Sampling position : Driver's nose
- Benzene, Styrene and Formaldehyde are quiet low level.

- 2 Ambient modes test compared. (Korea and China)
 - Longer preconditioning time : relatively lower emissions at early stage
 - Longer door closed time : increasing emission 101~ 187 % 16 hours later
 - Emissions can equilibrate about 10 hours passed.

- To do
 - Consideration of sampling position

Thank you

NEW THINKING. NEW POSSIBILITIES.
 HYUNDAI