



HORIBA history in contribution of environment improvement

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Personal Introduction



Affiliation, Job Title

Assistant Section Leader, Process & Environmental Systems
Team, International Sales Dept, Horiba, Ltd.

Work record

2008 Osaka sales office

2009-2014 Tokyo sales office

2015-2016 Bangalore office

※An overseas training student

2016- International Sales office

My Challenge

Contributed to improvement of India environment by
providing our solution and experience.

My favorite



Contents

- 1. Corporate Profile**
- 2. HORIBA Contribution in Japanese Blue Sky**
- 3. HORIBA Global Capability**
- 4. HORIBA Support in New Coal Fired Power Plant**

Corporate Overview

Headquarters

HORIBA Ltd., (Kyoto, Japan)

Business Content

**Manufacture and Sale of Analysis
and Measurement Technologies**

Establishment

October 17, 1945

Worldwide Employees

8,288

Sales Amount

1,827 MUSD (200.2 BJPY) (FY 2019)

R&D Investment

8.1% of Net Sales (FY 2019)



Atsushi Horiba
Chairman & Group CEO

Five Business Segments & Major Products

Figures are the sales composition ratio for FY 2019

Automotive (40%)



Emission Measurement
Systems



Process & Environmental (10%)



Stack Gas Analyzers



Medical (13%)



Automatic Blood Cell
Counters plus CRP



Semiconductor (23%)



Mass Flow Controllers



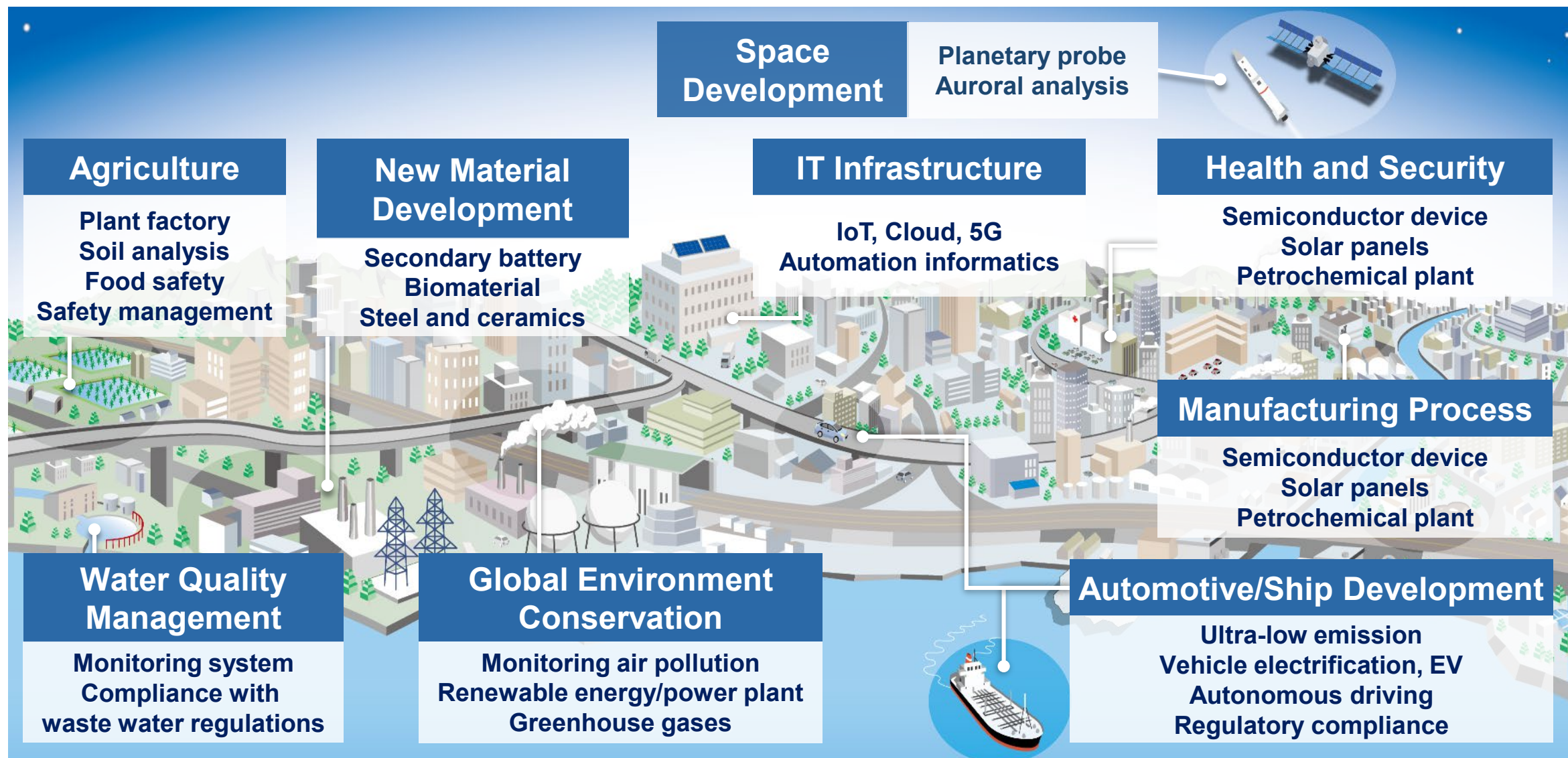
Scientific (14%)



Raman Imaging Device



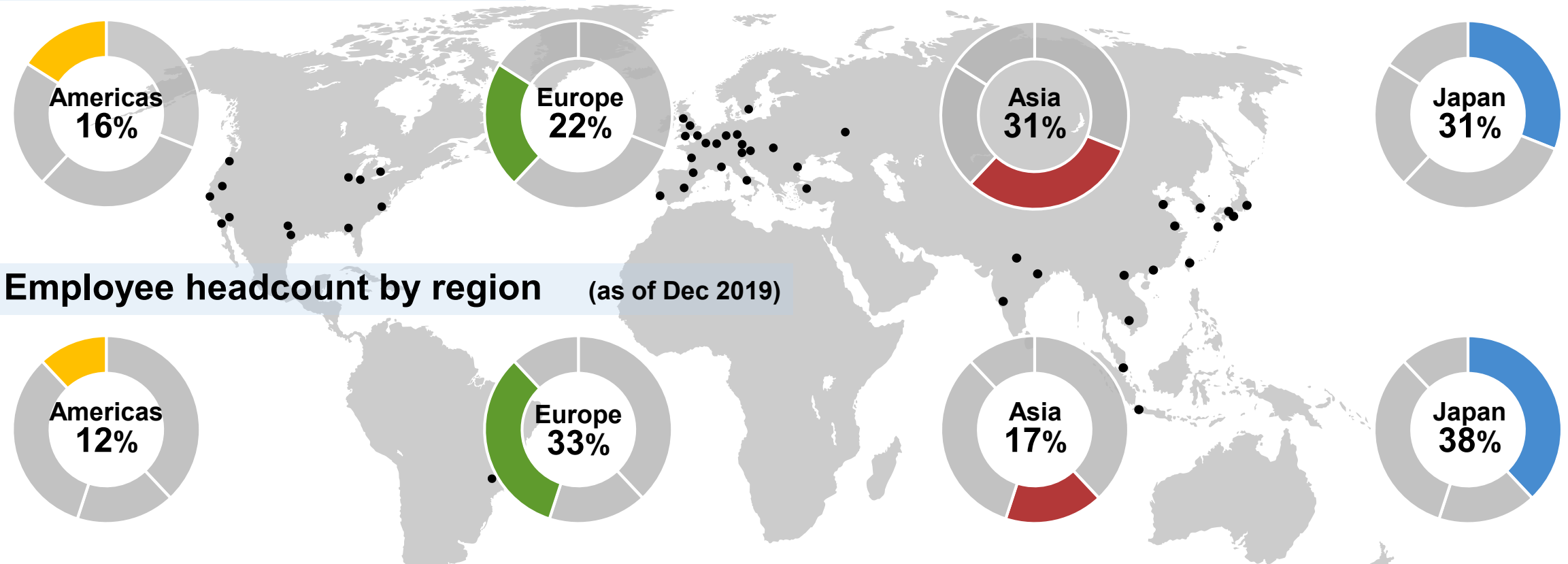
HORIBA's Business Domain



Global Network

Sales by region (as of Dec 2019)

● : Major business hubs



Employee headcount by region (as of Dec 2019)



Number of companies
(as of Dec 31, 2019)

49



Overseas sales ratio
(as of Dec 2019)

69%



Foreign employee ratio
(as of Dec 31, 2019)

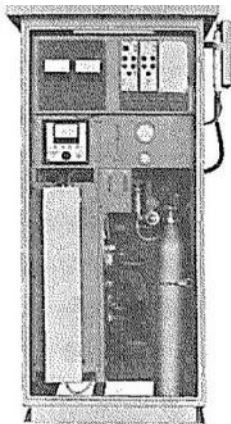
63%

HORIBA Contribution in Japanese Blue Sky

ESDA-1 (1st product)



ENDA-200



Decided to utilize
NDIR technic.

ENDA-800



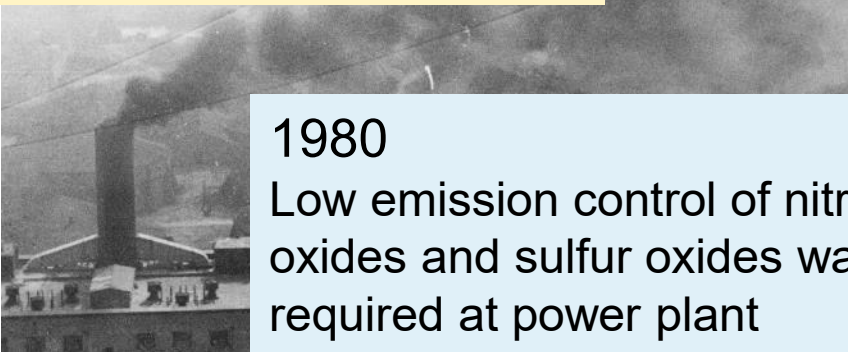
Advanced stack
gas analyzer
with low detectable
measurement
technic
SO₂ 0-100ppm
NO_x 0-20ppm

ENDA-5000



1969
Establishment of environmental
standard of sulfur oxides

1973
Establishment of environmental
standard of nitrogen and oxidant



1980
Low emission control of nitrogen
oxides and sulfur oxides was
required at power plant

40 years later
→



HORIBA Global Capability to meet local environment guideline



European Standard



EN-14181



China (Shanghai)



Korea(Seoul)



U.S. Standard



Part 60, Part 75



Germany (Oberursel)



India



Core Gas Analyzer Factory



Shiga Factory

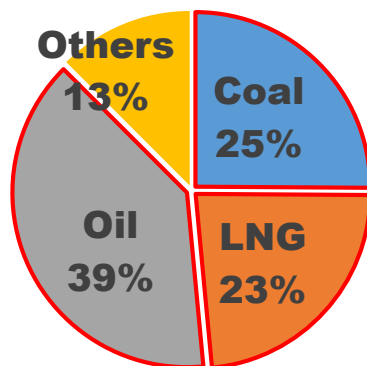


US (New Houston Factory)

Sold 2,000 units of stack gas analyzer to World Wide

HORIBA Support in New Coal Fired Power Plants

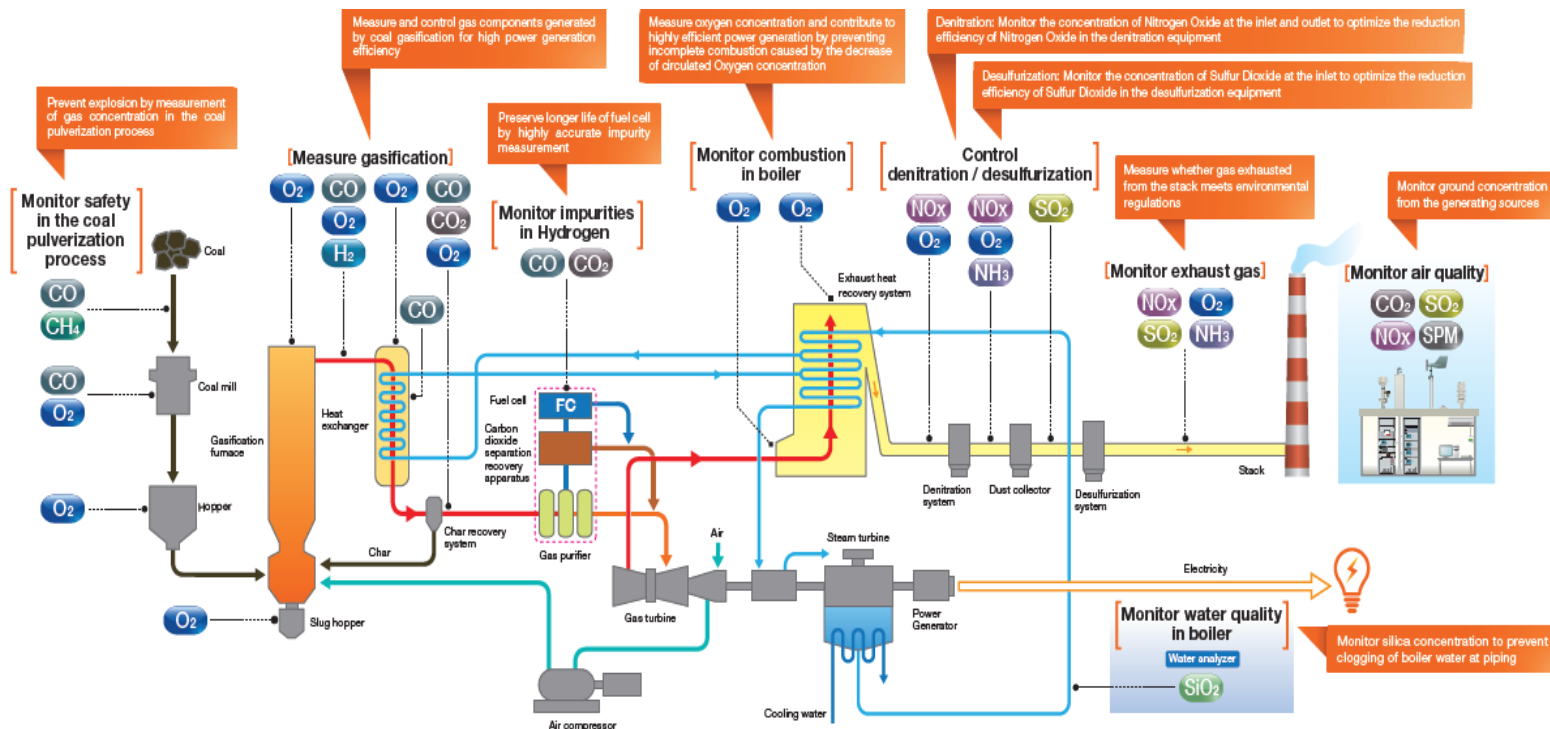
Composition of Power source in Japan



Japan has been dependent on fossil fuel by 87.4 % in 2017

※Source of the above data is agency for Natural Resources and Energy

IGCC (Integrated Coal Gasification Combined Cycle)
IGFC (Integrated Coal Gasification Fuel Cell Combined Cycle)
→ **Contribution of CO₂ Reduction**



Stack Gas Analyzer ENDA-9000/C9000 Series <ul style="list-style-type: none"> Meets customers' measurement needs in fuel and power generation systems such as coal, oil, LNG and latest IGFC, IGCC Simultaneous and continuous measurement of up to three components by one unit (NO_x, SO₂, CO, O₂, NH₃) Meets the specification requirements from electric power companies 	Stack Gas Analyzer ENDA-5000 Series <ul style="list-style-type: none"> Measures gas emitted not only from power plants but also from incineration plants and petrochemical plants Simultaneous and continuous measurement of up to five components (NO_x, SO₂, CO, O₂, NH₃) Long term stability by Cross Flow Modulation type NDIR 	Trace Gas Analyzer GA-370 <ul style="list-style-type: none"> Monitors trace impurities such as H₂, N₂, O₂ for quality control at gas manufacturing facilities Continuous measurement of up to two components among CO, CO₂ and CH₄ Long term stability by Cross Flow Modulation type NDIR Minimum detection limit of 10ppb 	Multi Component Gas Analyzer VA-5000 Series <ul style="list-style-type: none"> Multi gas analyzer that can be used in various application from scientific experiments and research to exhaust gas measurement Continuous measurement of up to four components (CO, CO₂, CH₄, N₂, O₂, SO₂, NH₃, O₂) Covers a wide range of measurement with one unit whether the concentration is low or high Optimal measurement range can be always selected. Equipped with a high sensitivity detector 	Silica Analyzer SLIA-5000 <ul style="list-style-type: none"> Monitor Silica in boiler water Short measuring time which is 5 minutes with high repeatability Wide measurement range with a high sensitivity range of 0.10μg/L to a high-concentration range of 0.50mg/L 	Ambient CO₂ Monitor APCA-370 <ul style="list-style-type: none"> Suitable for air monitoring, air background measurement and research applications Long term stability by Cross Flow Modulation type NDIR as optical alignment is unnecessary Minimum detection sensitivity of 0.5ppm
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Omoshiro-okashiku
Joy and Fun

おもしろおかしく

THANK YOU

Terima kasih
谢谢
Gracias
Σας ευχαριστώ πάρα πολύ
धन्यवाद
شُكْرًا
Danke
Tack ska du ha
Grazie
ขอบคุณครับ
Большое спасибо
Cảm ơn
감사합니다
Dziękuję
Obrigado
Merci
ありがとうございました