

We wish to express our appreciation for your significant and useful comments. We have revised the manuscript, considering your comments and suggestions.

Reviewer 1: Table 5 column headers are still difficult to read due to automatic line change. Please reformat for better reading.

Response: We revised the column headers.

Reviewer 2: Thanks a lot for your very thorough inspection. I think it is important to study on temperature drift on mass. I would like to kindly request to answer (or describe) below additional points before publication.

1. Please add more information (or reference) on the AIST reference in Page 5.

Response: The sentences were added to describe the additional information, as suggested (P5, L15-19).

2. Please show us the measured weighing values(in mg) of the components in Table 2.

Response: We described rough amount values of filled gases (P4, L5-6). We don't think the measured weighing values is needed for the purpose of the article. We show the measured values in Table A below for reviewer 2. Instead, we added the sentence for the uncertainties of the values because the uncertainties were important (P11, L3-4).

3. Please add uncertainties' sources (how to calculate) of each uncertainty factors as well as each component in Table 3. And please add a summary table (total uncertainty budget of a sample cylinder) with all uncertainty factors.

Response: We attached footnotes (how to calculate) at the bottom of Table 3.

4. Please write (add) their uncertainties of the final purities in Table 4.

Response: Their uncertainties of the final purities were added in Table 4.

5. For decision of CO<sub>2</sub> amounts, please describe how to calibrate the CRDS.

Response: We simply described how to calibrate the CRDS (p6, L33-L35).

Table A The measured weighing values.

Cylinder number	Preparation date	Measured weighing values, mg		
		N <sub>2</sub>	O <sub>2</sub>	CO <sub>2</sub> /Ar
CPC00556	15 March 2017	854769.3 ± 1.2	262923.0 ± 1.2	15438.1 ± 1.2
CPB28679	29 March 2017	990613.0 ± 1.2	300411.9 ± 1.2	17468.8 ± 1.2
CPB16178	5 April 2017	860566.6 ± 1.2	266688.2 ± 1.2	15243.9 ± 1.2
CPB16345	7 April 2017	842578.7 ± 1.2	257084.5 ± 1.2	15052.6 ± 1.2
CPB16315	12 April 2017	887499.8 ± 1.2	271247.5 ± 1.2	15770.7 ± 1.2
CPB16379	17 April 2017	1031180.2 ± 1.2	315534.7 ± 1.2	18351.7 ± 1.2
CPB16349	13 June 2017	1013089.7 ± 1.2	311111.8 ± 1.2	18149.1 ± 1.2
CPB28912	15 June 2017	1002963.3 ± 1.2	307304.7 ± 1.2	17975.5 ± 1.2
CPB28679	22 June 2017	1016867.6 ± 1.2	311455.2 ± 1.2	18178.9 ± 1.2

Numbers following the symbol ± denote the standard uncertainty.