

Present status of initial descriptions and distributions of Hayabusa-returned samples.

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Introduction: After the recovery of reentry capsule of Hayabusa in June 2010, which succeeded in collecting samples from the S-type near Earth asteroid 25143 Itokawa, Extraterrestrial Sample Curation Team (ESCuTe) of JAXA continue to perform initial descriptions of Hayabusa-returned samples recovered from its sample catcher [1, 2]. So far, more than 400 particles have been recovered and described to be clarified that they were composed of silicate, indicating their Itokawa origins by referring to results of preliminary examinations [3-8]. After the preliminary examinations, we started to distribute some of them to proposers for international announce of opportunity (AO) of Hayabusa returned samples. Here we mention the status of curation of Hayabusa-returned samples, including the third international AO.

Status of initial description of samples: Since the end of 2013, we started to describe all the particles larger than 15 μm situated on the cover of the catcher room B with direct FE-SEM/EDS observation in order to understand the nature of particles within the sample catcher and evaluate the degree of contamination [9]. More than half area of the cover has been scanned by the FE-SEM and around a thousand of particles have been analyzed by EDS. 30% of them are silicate particles, to be recognized as Itokawa origins. Rest of them are terrestrial contaminants or unknown origins. So far, around a third of the silicate particles described on the room B's cover are added to the list of "pristine" particles, which is available from our website (<http://hayabusao.isas.jaxa.jp/curation/index.html>).

Status of the 3rd international AO: We announced the 3rd international AO in Jan. 2015, and asked for research proposals until Mar. 2015. As a result, we received 16 research proposals from world-wide researchers, and they are under review by the committee of 3rd international AO. The result of the reviews will be announced in Jun. 2015, then we will start distributing allocated samples to principle investigators of selected research proposals.

Future plans: So far, we plan to finish the description of whole particles of $>15 \mu\text{m}$ on room B's cover in this year. Next, we will recover particles from a rotational cylinder, which is situated between the room A and B of the sample catcher.

Additionally, we are now developing a method for final recoveries of particles inside both room A and B of the catcher. In the method, we plan to tap the catcher and make particles inside fall down to metallic disks which are specially designed for the purpose and to retrieve the disks with upright positions in order to gather large particles which might not be recovered by those with upside-down positions as we performed in the past [2].

References: [1] Abe M. et al. (2011) *LPS XXXII*, #1638. [2] Yada T. et al. (2014) *MAPS* 49, 135. [3] Nakamura T. et al. (2011) *Science* 333, 1113. [4] Yurimoto Y. et al. (2011) *Science* 333, 1116. [5] Ebihara M. et al. (2011) *Science* 333, 1119. [6] Noguchi T. et al. (2011) *Science* 333, 1121. [7] Tsuchiyama A. et al. (2011) *Science* 333, 1125. [8] Nagao K. et al. (2011) *Science* 333, 1128. [9] Yada T. et al. (2014) Abstract #1845, 77th *Meteoritic. Soc. Mtg.*