

Modified tables in response to Review 1

5 **Table 3: Comparison of simultaneously test gas sampling of EP coated denuders and Raschig Tubes for gaseous HBr determination. The setup is shown in Fig. 1b.**

Experiment	Denuder		Raschig	
	Sampled amount of HBr [nmol]	Calculated HBr in sampled test gas [ppb]	Sampled amount of HBr [nmol]	Calculated HBr in sampled test gas [ppb]
1	1.8 ± 0.6	3.6 ± 1.6	26.0 ± 3.6	4.1 ± 0.6
2	2.3 ± 0.7	5.8 ± 2.2	28.1 ± 3.9	5.1 ± 0.7
3	3.0 ± 0.4	7.7 ± 1.2	41.6 ± 5.3	7.4 ± 1.0
4	4.8 ± 0.7	14.4 ± 2.3	83.0 ± 11.7	16.8 ± 2.4
5	7.6 ± 0.7	18.5 ± 1.8	111.7 ± 14.7	17.9 ± 2.4

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Table 4: Results of denuder measurements sampled in Masaya's plume on three days in July 2016. Sampling has been performed at three different locations with the following distances to the emission source: Santiago Rim 215 ± 50 m, Nindiri Rim 740 ± 50 m and in the Caldera Valley 2000 ± 150 m (Fig. 3b). Total Bromine has been determined by simultaneously applied Raschig Tubes (details in Rüdiger et al. 2021). HBr concentrations (in ppb) were determined by EP-coated denuders. Their respective LOD and LOQ were calculated based on the signal-to-noise approach using 3- and 10-times the standard deviation of the blank samples (n=3). The Raschig bias is the calculated differences obtained from the line equation of the orthogonal distance regression. The determined amount of HBr (in nmol) is given for comparison with lab experiments.

Date	Total Br* [ppb]	HBr [ppb]	LOD [ppb]	LOQ [ppb]	Raschig bias [ppb]	HBr on denuder [nmol]	HBr/ total Br [%]	Comment
18.07.2016								
Santiago Rim	1.85 ± 0.04	1.65 ± 0.05	0.04	0.12	- 0.13	1.42 ± 0.04	89	
Nindiri Rim	1.31 ± 0.03	0.44 ± 0.03	0.02	0.06	- 0.17	0.38 ± 0.02	34	
20.07.2016								
Santiago Rim	1.55 ± 0.03	1.14 ± 0.05	0.07	0.24	- 0.15	0.92 ± 0.04	74	
Nindiri Rim	1.22 ± 0.03	0.55 ± 0.05	0.09	0.29	- 0.17	0.45 ± 0.04	45	
Caldera Valley	Not available	<LOD <LOD	1.39 1.46	3.99 3.81		0.03 ± 0.01 0.02 ± 0.01		UAV-based sampling
21.07.2016								
Santiago Rim	3.05 ± 0.05	1.97 ± 0.11	0.08	0.27	- 0.12	1.53 ± 0.09	65	Simultaneous
		1.82 ± 0.10	0.06	0.26	- 0.13	1.42 ± 0.08	60	
Nindiri Rim	1.81 ± 0.04	0.55 ± 0.05	0.05	0.15	- 0.17	0.58 ± 0.05	30	Simultaneous
	2.56 ± 0.06	1.17 ± 0.07	0.07	0.23	- 0.15	0.91 ± 0.05	46	
		0.97 ± 0.09	0.09	0.30	- 0.16	0.75 ± 0.07	38	
* Total Bromine determined by Raschig Tube samples adopted from Rüdiger et al. (2021)								

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