Supplementary Information

For establishing AN curve with 0.5% saccharin solution, we gave water-deprived rats unlimited water access for 15 minutes a day during 5 days and on the sixth day, the water was replaced by the saccharin solution. As observed on Supplementary Figure 1a, there is a strong neophobic response on day 1 (S1) which attenuates on subsequent presentations of the taste on the following days. By the fifth day (S5) the amount of saccharin ingested reaches a plateau (see Figure S1A). This result is similar to what had been reported previously (Rodriguez-Ortiz et al., 2005, Domjan, 1976) and shows that safe taste memory consolidation is a gradual process.

In order to see whether or volume restriction protocol affected the rate of familiarization with the taste, we performed an AN experiment in which animals were divided in 4 groups with 1, 2, 5 or 7 days of saccharin consumption. The protocol was the same as for Arc experiment except that during the last day, rats were given unrestricted access to the fluid. For example an animal exposed to saccharin for 5 days was given 5mL for the 4 first days and then unrestricted volume on the fifth. The amount of fluid consumed was then compared between the groups. As we can appreciate in Fig S1B, the rate of familiarization is very similar to that of the unrestricted volume curve (ANOVA (3, 23) F=16.216, p<0.0001,
Fisher PLSD, D1 vs. D2, p=0.0015, D1 vs. D5, p<0.0001, D1 vs. D7, p<0.0001, D2 vs. D5 p=0.0291, D2 vs. D7, p=0.0167, D5 vs. D7, p=0.8808).

Figure S1: (A) AN curve. The presentation of novel saccharin induced a strong neophobic response (D1), which is observed by a steep decrease in the amount of fluid consumed. This response attenuates on subsequent days, until it reaches a plateau by D5. (B) Volume restriction did not alter familiarization with the taste, since no further familiarization is observed between D5 and D7. Data are presented as percentage of baseline.

Figure S2: Mosaic of a brain slice that was used for analysis. Squares represent the place where the two images per hemi-section were taken. Dark staining represents immunoreactivity to Arc protein. GI: Granular Insular Cortex, DI, Dysgranular Insular Cortex, AI, Agranular Insular Cortex, PC: Perirhinal Cortex, II: layer II of the PC, rs: rhinal sulcus, cc: cuerpus callosum.