Test procedure – Adhesive/labels on PET trays

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Sample dimension:
20 PET trays with low thickness;
20 PET trays with high thickness

Procedure:

1. all trays have to be washed in cold water to remove silicon residuals
2. labels to be tested have to be applied on a plain flat surface of the tray, preferably on the bottom side
3. after 24h time, from each labelled area of the tray, a minimum of 50 10x10mm samples have to be extracted
4. 10x10 mm samples have to be washed (*) in a 1% caustic soda solution @ 70°C (**) and no additives, using a 4 cm. magnetic stirrer @ 500 rpm for 6,5' time; beaker dimension 1000 ml with internal diameter 9,5 cm.; ratio between caustic solution and flakes should be 4:1 (i.e. 200 ml : 50 flakes)
5. flake samples have to be then rinsed in cold water for 3'
6. flake samples have to be dried @ 80°C for 2 hours

Final calculation:
After drying step, samples will be visual inspected to check how many samples got the label removed and how many did not. The result will be listed in %.

To show an evidence about residuals, an Oven Test has to be performed. Half of the washed and rinsed flakes have to be put in an oven for one hour @ 220°C; one high resolution picture has to be taken showing on the same frame the flakes just washed and rinsed compared to the ones who also got heated by the oven. The picture has always to be shown together with the above result in %.

(*): washing, rinsing, drying steps and oven tests has to be performed separately for different thickness of samples;
(**): temperature level is reduced – compared to the level used in PET bottles recycling – to avoid brittle effects