

### Biodegradability Testing & Certification of Plastic raw material concerning EN 13432

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We are KITECH (Korea Institute of Industrial Technology) Industrial Ecology Laboratory in Korea. As one of the DIN CERTCO approved laboratories (Registration No.PL127-3), we perform the biodegradability/compostability test on the basis of worldwide standards (EN 13432, ASTM D 6400 and DIN V 54900). DIN CERTCO is responsible for final approval and grants compostability logo to the certified product. We performed the biodegradability testing & certification of plastic raw material (test sample) concerning EN 13432. Test sample is made by blending the certified raw materials, PLA (DIN CERTICO Reg. NO.7W0014) and AP (aliphatic polymer, DIN CERTICO Reg. No.7W0100) to improve mechanical properties of poly (lactic acid). Sample is used as a coating material of disposable cups following proper processes. From the results of FT-IR and TGA, sample gave only the spectra corresponding to certified raw materials (PLA and AP). DSC results show no noticeable change compared with certified raw materials. The contents of heavy metal in the sample are satisfied with standard requirements. And, we carried out another test (disintegration & compostability) in our-manufactured pilot-scale chamber for the composting environment.