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Branches pruned from fruit trees are byproduct of fruit cultivation and a abundant source of biomass. Large quantities of this material remain unutilized and thus accumulate on farms. Especially, branches pruned from Japanese pear tree are one of the unutilized discarded byproducts, since pear plantation farms are located in urban areas, it should be possible to limit the transportation and collection costs of this unutilized biomass.

This study aims to identify efficient ways of using discarded pear branches. The main components of lignocellulosic biomass, i.e. pear branches, are cellulose and lignin. The cellulose can be converted into bio-liquid fuel and resource of plastics, the lignin also can be a resource of plastics. Moreover, recently, we found out the functional polyphenol, arbutin, from branches pruned from Japanese pear tree. Arbutin has been widely used as a whitening agent in cosmetics, because of its tyrosinase-inhibiting qualities. Thus, discarded woody biomass are promising resource for various useful chemicals.

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