UJI *BIOASSAY* LIMBAH CAIR TAPIOKA DENGAN PENAMBAHAN BIOFLOKULAN *Alcaligenes latus* TERHADAP IKAN NILA

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Abstract

Tapioca industry is one of the agroindustries which is distributed in many places in Indonesia. The activity of tapioca industry usually creates environmental pollution, due to its solid, liquid and gas wastes. Therefore, it is important to treat the pollution through techniques of cleaner production as an integrated and preventive environmental management strategy to prohibit and reduce wastes in industrial process.

Almost all of the tapioca industries in Bogor are small scale industries and have not implemented the cleaner production practices yet. Results of the survey showed that careless in discharging process of solid and liquid wastes and the absent of waste treatment caused pollution.

To the effect this attempt is subject to be know waste toxicity zoom moltens tapioka's industry already at inoculation with *Alcaligenes latus* to energi appraising fish life.

Bioassay test by using liquid tapioca waste which has been flocculated is tested to *Oreochromis niloticus* (nila fish). The test result indicated that the fish can survive at 26% level of biofloccullated liquid waste.

Key words: biofloculation, liquid waste tapioca, bioassay, Alcaligenes latus

PENDAHULUAN

Industri tapioka merupakan salah satu industri yang menghasilkan air limbah dengan kandungan senyawa organik yan tinggi (Yeoh, 1993). Selain tapioca sebagai produk utama, proses pengolahan ubikayu menjadi tepung tapioca juga menghasilkan produk ikutan yang berupa onggok, elot (lindur) dan limbah cair (Hardjono dan Maspiyati, 1990). Limbah industri tapioka memiliki beban dan karakteristik pencemaran yang berbeda-beda. Limbah padat industri tapioka berasal dari proses pembersihan singkong dari kulit serta ampas pada saat dilakukan penyaringan. Penanganan yang kurang tepat terhadap limbah padat industri tapioka (LIPIT) akan menghasilkan gas yang dapat mencemari lingkungan udara. Limbah