International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.07,pp308-313,2018

# Contamination Concentration in Smoked Golden Sandfish (*Holothuria Scabra*) using Nutmeg Shell Coconut Shell Smoking Materials

**Netty Salindeho[1]**

**[1] Department of FisheriesTechnology, Faculty of Fisheries and Marine Science, SamRatulangi University, Manado, North Sulawesi, Indonesia.**

**Abstract:** Sandfish are one of the marine export commodities that should immediately be developed its processing method.It is important due their high economic value in international markets, and one of those is golden sandfish*Holothuriascabra.*

Sandfish smoking is generally conducted in traditional method using hot smoked from burning wood in a smoking room. The processors usually used any kind of wood as smoke material depending upon the wood availability. Smoking can be defined as a penetrating process of volatile compounds into the sandfish from burning wood in order to gain products of specific taste and aroma, long shelflife from their anti-bacterial content and to inhibit the enzymatic activity.

Smoking is a processing or preservation method using treatment combination of drying and administration of natural chemicals from combustion of natural fire wood.

Sandfish smoking from burning wood for preservation originates from human civilization, in which it could yield products of desired taste and aroma[1].

Several compound contents, such as phenol, formaldehyde, and other compounds, coming from penetrated smoke into the meat and functioning as preservativesare believed to yield good taste and typical aroma and can give longer shelflife[23].This study was aimed at knowing the microbiological and chemical contamination content in the smoked sandfish, *H. scabra,*using smoking materials of megnut shell and coconut shell.

Smoking in general still uses smoking materials of coir, coconut shell and several wood types. There is also dry nutmeg shell, wastes of nutmeg fruit processing. This material can be used as smoking material to yield specific smoked sandfish product.Results showed that the sandfish smoked with nutmeg shell contained25.14% water, 60.67% protein, 2.02% fat, 16.38 % ash, while those smoked with coconut shell contained 24.44% water, 64.97% protein, 2.04% fat, and 16.81% ash. The sandfish smoked with nutmeg shell held 0.033 mg/kg mercury, 1.79 mg/L Cdand 3.50 mg/L Pb, while those smoked with coconut shell held 0.042 mg/kg mercury, 0.84 mg/L Cd, and 7.71 mg/L Pb.TheALT analysis found $9.09x10^{1}$colonies/g in the sandfish smoked with nutmeg shell and $1.36x10^{2}$ colonies/g in those smoked with coconut shell. *Escherichia coli* was found <3 APM/g in the sandfish smoked with both smoking materials.

**Keywords:**nutmeg shell, coconut shell, smoking, golden sandfish, microbiological pollution, chemical pollution.

**Netty Salindeho /International Journal of ChemTech Research, 2018,11(07): 308-313.**

**DOI= http://dx.doi.org/10.20902/IJCTR.2018.110736**

*****