

**STUDI PAPARAN NATRIUM BENZOAT PADA SISWA SMP NEGERI 1
TANJUNGSANG DAN SMP ISLAM TANJUNGSANG
MENGUNAKAN METODE *FOOD FREQUENCY QUESTIONNAIRE***

ABSTRAK

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Studi paparan natrium benzoat pada siswa/i di SMP Negeri 1 Tangjungsiang dan SMP Islam Tangjungsiang telah dilakukan menggunakan metode *food frequency questionnaire* (FFQ), yang menyertakan 150 responden. Natrium benzoat yang terdapat didalamnya, ditentukan secara kuantitatif menggunakan metode KCKT (Kromatografi Cair Kinerja Tinggi). Hasil survei menunjukkan minuman olahan yang paling banyak dikonsumsi yaitu teh. Konsentrasi natrium benzoat dalam minuman kemasan teh tersebut adalah 2,7339 ppm. Berdasarkan perhitungan paparan natrium benzoat rata-rata sebesar 0,057 mg/kg berat badan (bb)/hari, jika dihitung sebagai persentase terhadap nilai ADI natrium benzoat (ADI = 5 mg/kg berat badan (bb)/hari), maka paparan natrium benzoat sebesar 1,144% ADI. Paparan tertinggi natrium benzoat sebesar 0,205 mg/kg berat badan (bb)/hari (4,108% terhadap ADI). Berdasarkan hasil tersebut, disimpulkan tingkat paparan natrium benzoat pada siswa SMP Negeri 1 Tangjungsiang dan SMP Islam Tangjungsiang masih di bawah nilai ADI.

Kata kunci : Studi paparan, pangan olahan, natrium benzoat, *food frequency questionnaire*, ADI(Acceptable Daily Intake)

AN EXPOSURE ASSESSMENT OF SODIUM BENZOATE TO SMP NEGERI 1 TANJUNGSANG AND SMP ISLAM TANJUNGSANG STUDENTS USED *FOOD FREQUENCY QUESTIONNAIRE* METHOD

ABSTRACT

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An exposure assessment study of sodium benzoate to students at SMP Negeri Tanjungsang and SMP Islam Tanjungsang have been conducted using survey food frequency questionnaire (FFQ), in which 150 students took part in the survey. Sodium benzoate contained in those products were determined quantitatively by high performance liquid chromatography (HPLC) method. The results showed that high consumed processed drink products is tea beverage. The concentration of sodium benzoate in the tea beverage is 2,7339 ppm. Following the exposure assessment, sodium benzoate has the average value of exposure 0,057 mg/kg body weight (bw)/day. Calculated as percentage of ADI value, the exposure of sodium benzoate was (ADI = 5 mg/kg body weight (bw)/day) 1,144%. The highest exposure for sodium benzoate was 0,205 mg/kg body weight (bw)/day (4,108% of ADI). Based on these results, it was concluded that the exposure level of sodium benzoate among the student of SMP Negeri 1 Tanjungsang and SMP Islam Tanjungsang were still below the ADI values.

Keyword : Exposure assessment, processed foods, sodium benzoate, *food frequency questionnaire*, ADI(Acceptable Daily Intake)