論　　文
Regular article

日本食品化学学会誌、Vol. 22(3), 181-187(2015)
Japanese Journal of Food Chemistry and Safety (JJFCS)

マーケットバスケット方式による小児の食品添加物の一日摂取量の推定（2009 年度）

(2015 年 5 月 28 日受付)
(2015 年 8 月 21 日受理)

熊井康人[a]、河崎裕美[a]、酒井昌昭[b]、浦嶋幸雄[b]、山田信之[c]、関根百合子[c]、工藤礼佳[c]、中里光男[d]、早藤知惠子[d]、宮川弘之[d]、山嶋裕季子[d]、西岡千鶴[e]、酒井國嘉[f]、玉城宏幸[g]、古謝あゆ子[g]、建部千絵[a]、大槻　崇[a]、久保田浩樹[a]、佐藤恭子[a]、穐山　浩[a]、河村葉子[a]

a) 国立医薬品食品衛生研究所　b) 札幌市衛生研究所
c) 仙台市衛生研究所　d) 東京都健康安全研究センター
e) 香川県環境保健研究センター　f) 長崎市保健環境試験所
g) 沖縄県衛生環境研究所

Estimation of daily intakes of food additives in children using market basket method (2009)

(Received May 28, 2015)
(Accepted August 21, 2015)

Yasuhito Kumai[a], Hiromi Kawasaki[a], Masaaki Sakai[b], Yukio Urashima[b], Nobuyuki Yamada[c], Yuriko Sekine[c], Ayaka Kudo[c], Mitsuo Nakazato[d], Chieko Hayahuzi[d], Hiroyuki Miyakawa[d], Yukiko Yamazima[d], Chizuru Nishioka[e], Kuniyoshi Sakai[f], Hiroyuki Tamaki[g], Ayuko Koja[g], Chie Tatebe[a], Takashi Ohtsuki[a], Hiroki Kubota[a], Kyoko Sato[a], Hiroshi Akiyama[a], Yoko Kawamura[a]

a) National Institute of Health Sciences　b) Sapporo City Institute of Public Health
c) Sendai City Institute of Public Health　d) Tokyo metropolitan Institute of Public Health
e) Kagawa Prefectural Research Institute for Environmental Sciences and Public Health
f) Nagasaki Municipal Public Health and Environment Laboratory
g) Okinawa Prefectural Institute of Health and Environment

Abstract

Daily intakes of food additives such as colors, preservatives, sweeteners and food manufacturing agents for children (1-6 years) in Japan were estimated using market basket method. A list of daily consumption of processed foods was prepared based on the National Nutrition Survey (2001-2002) and National Health and Nutrition Survey (2003). The food additives with the highest daily intake was orthophosphoric acid (9.4 mg/kg bw/day, expressed as phosphorus), followed by condensed phosphoric acid (0.76 mg/kg bw/day, expressed as phosphorus), and propylene glycol (0.47 mg/kg bw/day).

Acceptable daily intake (ADI) and maximum tolerable daily intake (MTDI) set by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) or Food Safety Commission of Japan were compared with the estimated daily intake of food additives in children. The ratio to ADI of the colors, preservatives, sweeteners and propylene glycol were 0~1.9%. The ratio to the MTDI of phosphorus compounds was 15%.

Keywords : マーケットバスケット方式、食品添加物、一日摂取量、一日摂取許容量、最大耐容一日摂取量
market basket method, food additives, daily intake, acceptable daily intake (ADI), maximum tolerable daily intake (MTDI)

I　諸言

食品添加物は食品の製造、保存、栄養強化などを目的として古くから利用されている。わが国で食品添加物を流通するためには、厚生労働省（厚労省）から食品安全委員会による食品健康影響評価を依頼し、その後、厚労省の薬事・食

連絡先：〒 158-8501　東京都世田谷区上用賀 1-18-1　国立医薬品食品衛生研究所 食品添加物部　佐藤恭子
Corresponding author: Kyoko Sato, Division of Food Additives, National Institute of Health Sciences, 1-18-1, Kamiyoga, Setagaya-ku, Tokyo 158-8501, Japan