



CONSUMERS ASSOCIATION OF SINGAPORE

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MEDIA RELEASE

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CASE: 20 samples of toothpastes tested to be safe for use

The Consumers Association of Singapore (CASE) commissioned a test on 20 toothpastes sold in Singapore for two substances, diethylene glycol and fluoride, which may cause adverse effects in humans. The test results showed that there was no diethylene glycol detected in the 20 samples, whereas the amount of fluoride detected (if any) was within the 0.15% safety limit set in the ASEAN Cosmetic Directive administered by the Health Sciences Authority (HSA).

Background

With the prevalence of a greater variety of oral hygiene products in the market, one concern of CASE is whether these products affect consumers' health and safety. As toothpastes are typically used daily by consumers to maintain personal oral hygiene, CASE decided to commission a test to determine if these products are safe for consumer use.

Diethylene glycol and fluoride were selected as substances to test for because of the potential risks they posed for consumers should they be detected and/or exceed the permissible level. Severe exposure to diethylene glycol has been associated with renal disorders. Excessive levels of fluoride in toothpastes have been associated with symptoms such as tooth discolouration, especially for children, and the risk of bone fractures.

Under the ASEAN Cosmetic Directive, diethylene glycol is prohibited as an ingredient in toothpastes whilst fluoride content is permissible up to a maximum of 0.15% (when mixed with other fluorine compounds permitted under the Directive, total fluoride concentration must not exceed 0.15%).

Scope and Methodology

The 20 samples for this test were selected by random sampling. The samples were purchased from departmental stores, supermarkets and heartland provision stores.

The test was conducted in a laboratory based on the following accredited methodologies:

- Identification of diethylene glycol in toothpastes and oral hygiene products – gas chromatography-flame ionisation detection; and
- Determination of fluoride in oral hygiene products – ion-selective electrode to measure the total fluoride in the toothpaste.

Test Results

According to the test results, diethylene glycol was not detected in all 20 samples (see Annex A). Also, the fluoride content detected in the samples (if any) were within the permissible limits. The test results suggest that despite the prevalence of a greater variety of oral hygiene products in the market, these products are generally safe for consumer use.

Recommendations

Nonetheless, consumers are advised to purchase toothpastes from reliable and reputable sources, and follow the instructions for use printed on the toothpaste packaging when brushing their teeth. For children six years and under, they should use a pea-sized amount for supervised brushing to minimise swallowing. If consumers experience adverse effects, such as tooth irritation or gum sensitivity after using a particular toothpaste, they should stop using it immediately and seek medical attention.

Lim Biow Chuan
President
Consumers Association of Singapore

Annex A – List of 20 Toothpastes Tested and the Results

S/N	Name	Manufactured By	Distributed By	Diethylene Glycol (%)	Fluoride (%)
S01	Aquafresh "My Big Teeth" 50ml	de Miclén a.s. a registered GSK Company Priemyselný park Géňa Ul. E. Sachsa 4 - 6 934 01 Levice, Slovakia	GlaxoSmithKline Pte Ltd 150 Beach Road Gateway West #21-00 Singapore 189720	Not Detected	0.142
S02	Blanx White Shock Instant White 93g	Made in Italy Coswell Innovatori Italiani Via P.Gobetti, 4-40050 Funo (BO) Italy	Ricray Pte Ltd 3 Ang Mo Kio Street 62 #05-14 Link@AMK Singapore 569139	Not Detected	0.0902
S03	Charclean Charcoal Power Toothpaste 100g	Kobayashi Phamaceutical Co. Ltd Made in Japan	LF Asia Distribution 10 Raeburn Park #01-33 Singapore 088702	Not Detected	Not Detected
S04	Closeup Deep Action 160g	Made in Indonesia	Unilever Singapore 20 Pasir Panjang Road #06-22 Mapletree Business City Singapore 117439	Not Detected	0.131
S05	Colgate Cavity Protection Toothpaste 90g	Colgate - Palmolive (Thailand) Ltd 700/362 Bangna-Trad, km 57, Amphur Muang, Chonburi 20000	Yuan Lai Trading Transportation 53 Ubi Ave 1 #03-02 Paya Ubi Industrial Park Singapore 409934	Not Detected	0.0895
S06	Colgate Charcoal Deep Clean 150g	Colgate - Palmolive (China) Company Limited #338 Qing Nian Road GETDD Guangzhou, China	Colgate - Palmolive (Eastern) Pte Ltd 350 Orchard Road #18-08 Shaw House Singapore 238868	Not Detected	0.142
S07	Dabur Herb'l Basil 150g	Naturelle LLC, Al Jazeera Al Hamra Area, Main Street, P.O. Box 6399, Ras Al Khaimah, U.A.E.	-	Not Detected	Not Detected

S08	Darlie Tea Care Green Tea 160g	Hawley & Hazel Chemical Co. (ZS) Ltd 3rd Industrial Zone, Jin Chang Industrial Road, Sha Lang, Zhongshan Guangdong, China	Hawley & Hazel Chemical Co. Singapore (Pte) Ltd No. 1 Commonwealth Lane #06-30 One Commonwealth Singapore 149544	Not Detected	0.099
S09	Emoform - F Sensitive 110g / 85ml	Dr. Wild & Co. AG, 4132 MuttENZ/Switzerland	Corlison Pte Ltd Ang Mo Kio Avenue 5 #06-36/39 NORTHSTAR @ AMK Singapore 569880	Not Detected	0.108
S10	Extra Cool Mint Fresh and White Toothpaste 300g	P.T. Lion Wings, Indonesia	Lion Corporation (S) Pte Ltd 221 Kallang Bahru Lion Building Singapore 339349	Not Detected	0.0635
S11	Himalaya Herbals Complete Care Toothpaste 100g	The Himalaya Drug Company Makali, Bangalore 562 162, India	The Himalaya Drug Company Pte Ltd 9 Temasek Boulevard #24-01 Suntec Tower Two Singapore 038989	Not Detected	0.02*
S12	Kodomo Children's Toothpaste Enamel Protection & Cavity Prevention 80g	Thailand	Lion Corporation (S) Pte Ltd 221 Kallang Bahru Lion Building Singapore 339349	Not Detected	0.047
S13	LG Bamboo Salt Toothpaste 170g	Product of China	Sing Long Foodstuff Trading Co Pte Ltd 22 Seneko Crescent Singapore 758275	Not Detected	0.0992
S14	Ora2 Stain Clear Toothpaste Natural Mint 140g	Sunstar Inc, Japan	LF Asia Distribution 10 Raeburn Park #01-33 Singapore 088702	Not Detected	0.09
S15	Pearlie White Blanc Perfect Professional Whitening Fluoride Toothpaste 110g	Corlison Pte Ltd	Corlison Pte Ltd Ang Mo Kio Avenue 5 #06-36/39 NORTHSTAR @ AMK Singapore 569880	Not Detected	0.0906

S16	Sanjin Watermelon Frost 90g	-	Kinhong (Pte) Ltd 297 Kaki Bukit Ave 1 Shun Li Ind Pk Singapore 416083	Not Detected	Not Detected
S17	Sensodyne Fresh Mint 100g	Neocosmed Company Ltd 222 Moo 4 Rahaeng Ladlumkaew, Pathumthani 12140 Thailand	GlaxoSmithKline Pte Ltd 150 Beach Road Gateway West #21-00 Singapore 189720	Not Detected	0.0973
S18	Sensodyne True White 110g	Neocosmed Company Ltd 222 Moo 4 Rahaeng Ladlumkaew, Pathumthani 12140 Thailand	GlaxoSmithKline Pte Ltd 150 Beach Road Gateway West #21-00 Singapore 189720	Not Detected	0.143
S19	Signal Complete 8 Actions 100ml / 130g	Unilever Vietnam International Company Limited Lot A2-3, Tay Bac Cu Chi Industrial Zone Tan An Hoi Ward, Cu Chi District, Ho Chi Minh City	-	Not Detected	0.123
S20	Yunnan Baiyao Toothpaste 100g	Yunnan Baiyao Group Co., Ltd Product of Yunnan, China	Science Arts Co Pte Ltd 150 Macpherson Road Singapore (348523)	Not Detected	Not Detected

*Calcium fluoride is declared as an ingredient in this product; result reported as free fluoride only

Note:

Limit of detection for diethylene glycol: 100 µg/g

Limit of detection for fluoride: 50 µg/g