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1款根拉力测试後發现有小部件 作用,、「使用滑板系像要一条物巧・以 能免跌刑或碰撞而引致使用者或其他人 26.

> Marine Folding Inline Second (#14)则给说得示得决要求的签合字句 Hi Cabozzi Minion Twist Scooter (#5)@ 手術會上的英文警告字句標業別次級「警 告,字题-

全部様本時空テ実線火景谋音 本會參考歐洲狀具安全標準EN71

Part 3的试验方法·极能各様本的可接触部 件 (accessible carrs) 会资理从19时的安全 素(包括紫)銀、師、銀、硼、錫、三價路、六 信持、結、鋼、鉛、鐺、汞、額、硒、氮、錫 有機銘和幹)。全部基本被出約特定元素種 出量都低於假测玩具安全博准规定的理念 要要求·情况令人滋意

PAHs 检测

多環芳香煙 (Polycyclic A Hydrocarbons · 撤捐PAHs 〉 是常見放慰 展 (plastics)、検照 (publics) 和環境的 (Libricating oils)中的緯質·赤可能存在於 部分以派型有科製給約物品中,提住歐洲 石些湖家回在工具平桥·星度/回板原子 病、運動胃品、玩具中核出PAHa,常中較常 出現於樂靜和較柔軟或深色的星腳物料。 目前已刻的PAHs超速100程,超分理算器 致癌物質;一位百言·分子量較大的PAHs 毒性較高·百數人類的影響則視乎含量高 任、除偿给证、按照存货集内来。

本港现时並未有並玩具或兒童用 品的PAHs含量設定上限+不過+自2015 年12月27日出:乾輕《化學系注释、深 估-許可和用制法根》(使用REACH) 2013已限制在氢地集團演費品及现 具的PAIL合量。

MARCH MARKET - Benedalowers rao(Doyneme + Benzo(a)anthrai Benzolbittuoranthene - Benzol (I

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Stand with and 滑板車一向深受小孩 歌迎、在梁麗、蘭范平台會看到小 孩給養滑板車奔駛、屍個不亦要手。但 這玩意不時爆發非偏意外,要保護小朋友。 首要確保資來的是一部安全的滑板 車·源試涵蓋15款兒童清板車·發現超過半 數樣本未能完全符合玩具安全標準·另 有部分様本抽出的PAHs含量高於德 國GS Mark的要求。

测試4款雨輪及11款三輪滑 板車

市面的兒童浴松里石肉釉及三榆肉槽 用标准极单的东西基本上均用格里里一板。 月老常常将平衡夺赞的技巧,因此不太语令 年幼兄童徒用·三輪用板車車輸是「前一後 二」或「前二歲一」而故這計,比類滑板車板 易雄帅及平衡、遗合教乐台的记录使用。

说试了15款兒童滑板罩·包括4款用桶 章及11款三輪車,售價差質质大,由\$196至 \$150·孕利继本播合百部公司、开旦皮及语 板車店等·模本標示的最大承重量由20至05 干洗不够。网络席楼木圣部可提合,三崎席楼 米田口方は空港合・社会会運営及休憩。

機械及物理性能測試 5 款通過玩具安全標準所有要求

三輪滑板動

到赵山本语蜀立宫殿室委书馆》记录 安全標準EN71Fart 1進行,以評估標本的機 起办协管性安全委员。希望都想的运行,还 根尔拉塔方图委员不太课程。

SWALDON T

Interceptor Scooter / 2003660

Folding Inline Scooler / \$2909FID \$200 2.0 5度以上

A²Bick Scooler^A \$660 2.5 500.01 05

11 50

12 Zine

13 HTI 14 Avigo

15 Base

具闭根率的最大杀重為50干充·15款採木 4 121" Scooler (84E (#8)70 "Report At Kick Scooter (#15) 包装上博示的限大承 重分别為60千克及65千克、超出標準所定 的因大杀者:坦诺语装资料不履於还且领 別、不過由於#8及#15標示的適用年齢為5 盒成6盘以上,而在现售生活中,小朋友-复均有效均量操作用 和金把持板来用於双型·战社运2款型法的 调薪给导次比较测试中以供参考。

5款表現優異·通過全部測試而且總 示拟塔亦完備·包括「Globbarg Primo (#1)、 THTL: Disney Toy Story Move & Groove Scooter (#2) · ⁷Avigo, Twisty Scooter (#3) - "Zinculinterceptor Scooter (#12)3 Feffi, Helio Kitty Eokline Sconter (M13) + 「21⁴ Scooller」RIE (#6) 及「Avigo」Folding inline Scooter (#14) 亦通過全部测试项 日·普韋品標示統明及/或包装使設計不 直完善→ 餘下S該則在結構及問題→ 手柄管 eering tube)強度、緩小部件、包装及

全部様本的際重型均通過標準要求 用板第一位含分接触分词能体系型。 曾勒珠石助苗州車擊時·清板車會使優地減 建-不致突然急停。15款楼本的服能煞车等 お通過標準の印は事点・現场中在加上負責 (59.3千克)及放於傾斜10°的平台上。然應

5.10年1月月1日

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接線標準要応・車輪與車段之間的間 除尺寸不應在5至12毫米之間,以防止小孩 把区语或更的更编码,工资不慎置於提回 前被夾倒。『Y-Volution』Y Gilder XL(#6) Putrauma Marsel SpiderSerne Spiderman 3 Wheel Scotter (#7) > The Yan, IBBE TRUE 清秋軍 (49) 、「Minucaj Dinney Frozen Multi-Function Sconter (#10) 70 "Rawer, &² Kid Scooter (#15) 的問題尺寸介乎5至12毫米。 同-总装有补效量- 652



3 款手把握把末端較細

局來渴板單時,這會出現意外關例的

情況·若滑板覃的手柄握把末庸太尖描

市場會在開發結準僅小油或等人的解實成

身體其他部分、接線標準規定、干柄握把

末睹的直徑不應小於40毫米。¹Mesuca」

Marvel Spider-Sense Spiderman 3 Wheel

Scotter (#7) - PScotTer, SSWT-929 (#11)

及「Razor」A^T Kick Scooter (#15)的日朝朝

個小給標準的最低要示(120毫米)。若前

除去小、使用或重新活力中的的需求差别

面間錄時,容易紙屬不定這單餘石機會藏

5 款手将管或踏板端度有待改善

各拱上50千克的重量並持續5分鐘。手柄

新不能納板/所編(colupred)、新潟・以及用

作绩定于杨曾高速或粘止于杨曾擅合的被

置不能组续或失效·以助止手柄管在面到

大学部内成果上の内容やない。(論論・体験

乘省失去平衡而摔倒,程建5分缝的测试

後、「Fei Yue」 個限王子兒童清板車 (#5) 及

Mesuca Deney Frozen Multi-Functio

Scooter (#10) 約于将管斷裂或移位。

增减增速要求·测试時干桥提把网油

赴外·#7-#10-#11股#15的前航宽

秋末地自営9万7有34.9至38.5年光・

線関係·騎隊者可並因此律利

69.98

12.58

泉的北部-

8.款程示按用不完美

小孩不愿意问证得东部,因为拉拉

任動記具、記具有機會经營不住的段繁建

有部件影荡盆远或细小碎片·弄傷小孩。

接線玩具安全標準規定,所有還合3歲以

下兒童使用的玩具着不應存在任何讓小群

件,否则吞下可至硬高,甚至有窒息的風

隆- ⁻Mcro₂Mini Micro Delute (#4) 服務

遗合2造以下记录使用·检其意身的部分途

眉轮和及附近的装牌贴纸树拉力用试像板

3 款輩料包裝錢大薄 易有窒息

Spider-Sense Spiderman 3 Wheel Scoote

(#9)波(Avigo_j Folding Inline Scoot

要求的0.038毫米,开育外会在小路前上

有様会流芸其口、泉、日初呼吸及護改変

Mesuca, Marvel Spider-Sense

Spideman 3 Wheel Scooter (#7) + F21^e

SconTer, RdF (HR) + FEei Yue, #1977

子兒童滑板章 (#9)、「Mesuca i Disney

Fraten Multi-Function Scooter (#10) -

Scooler(SSV/T-929(#11)78 /Rater

A² Kick Scotter [#15] 的物語、標範

(#7)、「Fei Yue」標度王子兒童清板車

(#14)的感料包装袋平利煤度肉低价模准

30 M V IN SI Filescena (Marvel

猫·形成小御师·不将標準要求。





测试報告

成的兼即或原即部分·其所含约上述3種特 TEAH POINT OF ANY AND SMALL

求·該計劃除了同種限制REACH法規指 #SerzoEgutulperytene - Indeno[1,2,3-c,d] pyrene - Acenaphthene - Acenaphthylene Anthracene - Elupranthene - Eluprene -

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Naphthalene Ph w) (於對 該18種PAHe的總量法原值要求-該計劃規定 员时間接着皮膚(多於30秒)的现象物料(例 如于柄脚把)·其前含的18種FAHk線重上限為 Img/kg·南原(Naphthalane)的第一含量不可 超過imm/kg。至於預料會長時間成重複性結 時間接觸皮质的玩具物料(例如于所提把网油 下·而获含量则不可追望2mg/

為蘇聯座自完善產品的安全程度以加強 對兒童的問題-木會與老婆國務局安全委員會

特别或重要性植物型接触,或者可能被能 兒童滑板重測試結果 1 Date \$580 2.4 3痕以上 . -----2 HT \$399 16 3mtBLE 20 Avia 38101 4 Nicro Millimoro Delute / MP \$850 2.0 2歲至5歲 35 ------00001 00000 0.4 0.40 0.8-2.6 (1.4-1.4) 5 Orbers Minice Twist Scools 8350 1.9 Smill 20 -----***** 6 Y-Valution Y Gilder XI, \$765 27 5.M.229.M 50 access a const const access ••••• ••••• 0.4 0.4 7 Nesses \$258 1.8 3mm.LL 40 . . 000 T 2 0001 00000 0.2-0.8 ID.8 conter / DCA21186-5 Wheel Sc 1542 AV \$350 3.4 6m,81£ 60 ••••• •••• 53 5.0 8 21" 54 9 Fel Yes 病因王子 兄亲亲近的 \$738 2.5 Smill 35 . -----100.0 ee1 rg 00000 1,2 (1,2) Daniey Prozen Multi-Po Scooler / D0k25-Q 7 B 001 00000 14(1.4) \$300 2.5 3歳以上 30 10 News

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SRUE

\$350 1.0 5歳以上 50 ■

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ene - Berrzofkiftworanthene R m(a,hlanth:scenel@It@PAHist@0 试动和具有效癌性、疗被数据提紧的 出射人相具有致癌性 (presumed to have - 頁FEACH法根規定・在正常使用适合 建筑目标设下, 获良由金银收建造建取品

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前原用的自然性安全根藥計劃GS k對玩具中的PAHa含量有更單語的要 carcinogenic potential for humans) 的物 定的8種PAHe6%;亮加上10種PAHe(化 的產業的統)的18種PAHe8種業產為5mg/kg以

131 (4) (7) ■ 指本軍編員庫是公開的問題です今平5至15軍末公開,物構亦作改善 回信本治事業的實施公式標準的黨系(基本/相違な改要來)。 在原本平地提起不能自實施小型要求的要求(基本/相違な改要求)。 ы 4.继承司役司法法宣主局的中、基权或部权差损的通量升展至。 基本#3、#10次#11於這些回到年後時最重要,並在於#回到里大法 (後·莫奈原本連身法対応認及性) 1 信本的包括会-30円書板並且上大以成出設得了建築要求的減分習合子句。 或部科協助時的年期中からの20回来。若常大會位人及其上會加速加口一員一件仍認識意力的 申 电不应回用需义品 有關和自己的目的相思的。 機械及物理性和用於整整环分化量: 加減加增加 45% 能化循环 平时等3.8 20% 他从信环 影響用分析電波上量计算计计算在式求证 资不生效。使命运動的原则。這些關鍵的 a factor)- 効果本を重要項目の MADEMENTY -いは他行・公前後本11億別位元素的年齢量成合体中的現在 2. 的PNA-MEREDIPEE単次の年、APPS OS 201401 PNK-M FPA-M的合業。 distant hand (・ 一 電車高の約20時間になり加工上的手上板。 約20月約20時間になり加工上的手上板。 約20月前20時間になり加工上的手上板。 約20月前間になり加工上の手上板。 10月前になり小板であり、 10月前日本事業後期、15日の小板の小手具用地注意。 の現在のための時代の時代 時代における時間からいたちからしていくていた かられていたり間を現在が出る。他上的でいたの にの時代を上部にな 型100mm 全都第日主任(Internet) Viel和客户上任(Internet) - 本446年全国成成之上目-

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0.6-2.8

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物業自動協力全部新 計劃規定上現 1(1)

••••• ••••• 2,3 0,0

(AFPS) 的PAHs制成及保体要求文件AFPS 05-2014-01 FAK·使制各種本子研鑽把河银箱 电射有配线总统,在實際使用情况下,小 者需要终生避免服食某些中,百菜,日常生活 部分的物料中18圈1941的含量。

没有核比可致癌的 BaP

约沒有検出歐盟REACH法超指定環想的8種 符合要素+测试结果描示+适3胶橡本手机 PAHs:包括板亚圈注目屬人類致癌物質的 上的配解贴纸细绘出PAHs:不透绘量如符 苯基因依(Beroolal pyrene,他朝BaP),符合 合GS Mark要求,量中只有標本非3的供紙 REACH的PAHs含量要求

大印分様本統出の量PAHs

「Globberg Prime (#1)没有搬出是次路输的 影響? 18種PAHa外-其餘14款的手柄依料分別在長 特限指端皮质的部分及/成至影会長時間成重 聚千硝铵积,有诸会经皮瘤接触,甚至称为 崔佳煜叫舆接编皮甫的部分模出不同程度的 到手柄物料所含的PPA+6-部分橡本手柄物料 PAI-KI的景

該鄉本包括「Maro」Mini Maro Deluse (#4) - 反應·爾利較容易透極人士這可能出現应需 Pr-Volutiony Y Gilder XL (#6) - Mesucay Manuel Snider-Sense Sniderman 3 Wheel - 改善性政研生反映[如表示[如文字]] 新闻 核出氨量PAHa+ 但線量符合GS Mark的相關 要求,给下10款保留「HTL」Dianey Toy Story 等反應,只有總合對我認識。 Move & Groove Scotter, (#2) - "Avigo, Twiety Scooter(#3) · "Ozbozz_Minion Twist 厚鬆透醒 · 日常生活中兒童可能會經不同 Scooter (45) - "21" ScoolTen RUE (46) - "Evi - WHERE WHERE - WHERE - WHERE WE YLe, 摄服王子兄童编校章(#9)、¹Mes.ca, FAHs混合物可能會就造应者, 引致要谈。 Daney Frozen Multi-Function Scooter (#10)、 南原赤是會別激反廣的物質+若來兒園便 「Zinc」interceptor Scooter (#12) - 「HTT」Hello 手有復口 · 有機會增加反廣戰收PAHs的限 Kitty Folding Sconter(#13)、「Aviso」Folding 位、課課家员整時服务讓小闆互使用時板 hime Scooter (#14)及 ⁽Ranor_JA² Kick Scooter 草·玩樂後·建讀書快用品和肥皂構洗于 (#15)的平病县把抱料所输出的PAHs最高 液清洗带干,减低兒童婦樣干病後拿取自 總要介平1.2mp/kp平5.8mp/kp·高於機關GS 執所還入PAHa的總會。 Mark把國要求的上級(Ima/kg)。

#5-#9-#10-#1220#13) 統出國內的統合量(由 12至5.0mg/q)同時高於推測(35 Mark並長時間 蠶豆在(教师检六級發去能設業块乏症·又 检细应需的玩具有和所设的上限(Imp/kg)

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的友有機會問中購及這些配約點紙。故 全記樣本手柄物料符合 REACH 法規 内價或重複性组時質被爆皮瘤的玩具物料 中18種PAH6結量的要求上級(5mg/kg)以 所有種本手括提把可接着部分的教科 及签合量上限(2mayka);評估種本是否 所核出的恶合量(2.7mg/kg)) 新高於褒問 GS Mark的要求上限 (2mg/kg)。

15款標本手柄昇把約物料中・除 如何降低標本中 PAHs 到兒童的

见室在使用词版章的时候·登手会初 所被出的茶·本島具有評量性·屬分子量較 在長時間接触皮面的手柄握机把作+4 低的Alte-加皮瘤接触等+有着金毛皮能够 ·关·不竭·一颌的言·相定音物收益不是以而 秋高·部汾人士可能自由现现高·感心·福祉

石湖縣學會會並及皮膚奧科醫生師

14款新班出版·管中版《维本#2+83+85- 算豆蛀患者可能出现最重影響嗎? 林油精物情影大的桃本用的是可能会 氧GRPD缺乏症》出名出现治血反應·為能

展末中保存#5、#12和#13点工新期 を提入計まざ保護編集株和保存基本協力・由 亦要毫免接續黨丸或含然的衣物防衛用品 (k)本會局差別推測(2) Mark並用於會局 非影響一來現象性資素原稿,一條會調到資 植、出现呼吸不畅原和心脏加快转换况。

補關聯邦風險評估所(BrR)的資料局 示,被中毒偏素與呼吸吸入、口服逼入和皮膚 接續会談的藥劑倒是有關+線呼吸吸入蒸集 磨後可取溶血性資素 (haemolytic anaem 的结果是自己的大量总能石图。但这路道想 品引致相關情況的機會不大·丹麥環境局的 研究報告亦指、橡膠和型膠製品中小量等並 不可能引致追血性贫血反應。

摩本中手柄提把所输出的符合量、连任 於臭丸或衣物防囊用品中所含的分量,相信每 皮膚吸收微量的能並不足以今患者可致溶血 反直,随序和带生实体充松,小雨友很定会 在戶外玩调被車。在空氣流續環境下程呼吸 收入高渡这茶菜菜的粮食校证。

呼籲業界降低玩具及兒童用品中 PAHs 含量

小田安町総合日常生活由根本機能得 接觸到不同種類的PAHs,在日積月累接觸的 情況下,不排除長道對羅原編成影響的可能 性,本會建議玩具製造商和体擁商不時留意 各提他玩具及总会用品灯立的图新法规要 求·另呼編製造由改用不合PAI-b就含量校低 PORTED - TO STORE #5-1- MUZZ ADDRESS - MURZ



 物理小孩不直以計算動作為上示例如 但失去平衡·费立即除潮洲成果 不直在如為上非同身所面,因車上的時 #那一股不是最計具下# THURARDOWNE 利利期小市 博科田常常人及即读者 (有·以免小法验保计标率转因失控前篇) **股目已改变人**-教师小田使用田板和政立四大王(配合加和即 FRI USEN WHERE SEATING 保護 · 但次使用前均消给在一九其是螺絲必须# 定捐除查所有零件是否有單換及這板有否確認
使用後、宜用還有輕抹手柄、諸板及單輪等。

他在香港供應的玩具·其安全受《玩 具及兒童產品安全快例》(快例)及其附屬規 何所如於- 根據你问, 怒动声, 進口市及住市 度在出版就具味·漂符合体例《时表--}内訂 明的3赛玩具株里其中一套株团内用截全部 透黑於旅玩具的规定。183套玩具增速包括 (1) 限決時進85 EN 71+(2) 並開材料及試 駿學會標準ASTM F963-11及(3) 國際標準 (50):5124-就今次本會的意話報告,海關已 對木能通過歐洲標準之產品作出證達·海額 内翻注以具的安全問題·印图連調查有死 的段话处。苏不祥这目到古曾各定集店铺纸 古·試購構本並後往政府化驗所進行安全則 试·如果拥有简单。查探取周省执法行助。

及#13年初可要始交後前符合EN71-Part 1-

机物料符合微型该例的PAHs要求。

「Litaro」(\$4)的代表商表示\$4更多 開始可書類空使用符合EN71-Part 1標準 治公司派為44軍身上的职能在本會是次項 試影放影研究書件,又描意由園林時刻每 一個生產工序·放+4在市場上銷售多年並 必次送職實驗室預試,要失示讓不能標準 站站时题桥压,丝衣尔祥生意的座员已沒 有使共适项注意。

「Othorz」(#5)的生產商標#5個調 可實驗室證明符合EN71-Part 1+EN71-Part S標準器做開REACH注機的PAHs操作桌 2、故非5已符合本港《征息及见常要品安 fHTI,[#2及#13)的生產商表示#2 全保例》並與木會提供到試統合。該公司 表示不同意本會的創成結果-並認為#5末

%每级12·总包本会使用和证据中,加小司 的手机管性穿到达,量由於實驗室以不同的3 指本會是次測試結果已顯示#2及#13符合 式進行測試-又稱#5在市場上報告多年並多次 水港《双具及兒童產品安全保护》及其手 紧重實驗室測试,检未出現不符標準要定的情 况·赫公司又将本会是次的PAHs被刑法来已算 示#5的手柄物料符合微型探例的FAHL要求及 本連接包要求·说為本會以關聯GS Mark的18程 PAHa即后要以核能及评估其要品,要求误於容 品的PAI-8合果该定上限~)

「Mesuca」(#7及#10) 的生產商表示合就 要求的情况,至於教师站延方面,总公司指 本會是次的制設結果及普其產品的設计及質素。 以符合数:HIL具安全标准的数术-缺公司又参曰 要會探護安全制料,以控制要是的PAHs含量。

「21" Scooler」(#8)的代理商表示會更 新產品的中文說明書資料並提供英文說明書 以好合数利证具安全根据的要求,因公司又按 由於其生產而及廠而並未有效到歐洲及美國等 國家會正式實行標園產品安全委員會AFPS GS 2014:01 PAK的要求·故障向在现階级脑炎在 生產過程中控制其產品的PAI-6含量。 . .

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Translation & Media

CERTIFICATE OF ACCURACY

DataSource International Ltd, a professional Hong Kong-based translation agency, is competent to translate from Chinese to English. We hereby certify that the attached translation is, to the best of our professional knowledge and belief, a faithful rendering of the following document:

- TEST REPORT

In Hong Kong, on 21st January, 2019

Operations Manager Sandrine Bommelaere

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The test examined 4 2-wheel and 11 3-wheel scooters

There are 2-wheel and 3-wheel scooters for children on the market. 2-wheel scooters work in the same way as a bicycle - the user needs to be able to balance correctly, therefore they are not particularly suitable for very young children. 3-wheel scooters feature either two wheels at the back and one at the front, or two wheels at the front and one at the back. These scooters are easier to control and are ideal for young children.

We conducted a test of 15 scooters, including 4 2-wheel and 11 3-wheel models, with retail prices ranging from HK\$198 to HK\$850. The samples were provided by department stores, toy stores and scooter retailers. The maximum load of each model ranged from 20 to 65 kg. All of the 2-wheeled models had a foldable design for enhanced portability, in contrast to only 3 of the 3-wheeled models.

Mechanical and physical testing

5 models met all safety standards

The mechanical and physical safety features of each model were tested by an independent Hong Kong laboratory in accordance with EU EN 71-1 toy safety standards. According to these safety standards, the maximum load of toy scooters must not exceed 50 kg. 21st ScooTer's R4E (sample no. 8) and Razor's A2 Kick Scooter (sample no. 15) had a maximum stated load of 60 kg and 65 kg respectively, and therefore cannot be classified as toys. Nevertheless, as these products are marketed as suitable for children aged 5/6 or above and children of this age can be expected to use scooters as toys, these products were included in the test report for reference purposes.

Five models passed all tests and were equipped with labels providing detailed product information: the Globber Primo

(sample no. 1), HTI's Disney Toy Story Move & Groove Scooter (sample no. 2), the Avigo Twisty Scooter (sample no. 3), the Zinc Interceptor Scooter (sample no. 12) and HTI's Hello Kitty Folding Scooter (sample no. 13). 21st ScooTer's R4E (sample no. 8) and the Avigo Folding In-line Scooter (sample no. 14) also passed all of the tests, although the label information and/or packaging did not meet the required standards. The other 8 samples had structural issues, weak steering tubes, substandard components, or poor packaging/label information.

All samples met the necessary braking standards

Most scooters feature a fender brake on the rear wheel that brings the scooter to a gradual stop when stepped on. The fender brakes on all 15 samples conformed to the necessary standards, i.e. they were effective with a load of 59.3 kg on a surface with a 10° slope.

5 samples presented potential trap hazards

According to the certification standards, the gap between the wheel and chassis must not be within the range of 5-12 mm, as this may cause children's fingers to become trapped. The Y-Volution Y Glider XL (sample no. 6), the Mesuca Marvel Spider-Sense Spiderman 3 Wheel Scooter (sample no. 7), the Fei Yue 'Extreme Prince' scooter (sample no. 9), the Mesuca Disney Frozen Multi-Function Scooter (sample no. 10) and the Razor A2 Kick Scooter (sample no. 15) all had a gap of 5-12 mm and therefore failed to meet the required standards.



The test examined whether the gap between the wheel and frame could cause fingers to become trapped.

The handlebar grips diameter was too small on 3 samples

If the diameter of the handlebar grips is too small, it may cause injuries to the feet or other parts of the body if the rider falls off the scooter. Certification standards require that the handlebar grips must have a diameter of at least 40 mm. The Mesuca Marvel Spider-Sense Spiderman 3 Wheel Scooter (sample no. 7), the ScooTer SSWT-929 (sample no. 11) and the **Razor A2 Kick Scooter (sample no. 15) failed to meet these standards**, featuring a handlebar grips diameter in the range of 34.9 mm to 38.5 mm.

In addition, the diameter of the front wheels on samples 7, 10, 11 and 15 was less than the required minimum (120 mm). If the front wheel is too small, the scooter may become unstable or trapped when it travels over an uneven surface or gaps in the road, which may cause the rider to fall off.

5 samples had weak handlebar grips or decks

According to certification standards, the steering tube should not collapse, break or bend when the end of each handlebar grips is subjected to a load of 50 kg for 5 minutes. In addition, the locking device used to fix the steering tube in place must remain engaged and operable to prevent the steering tube from becoming deformed when subjected to an impact, which may cause the rider to lose balance and fall over. After a 5-minute test, the steering tube on the Fei Yue 'Extreme Prince' (sample no. 9) and the Mesuca Disney Frozen



On some models, the steering tube snapped or became dislodged during strength tests.

Multi-Function Scooter (sample no. 10) had broken or become dislodged, and the locking mechanism on the ScooTer SSWT-929 (sample no. 11) was damaged. The steering tube on the Ozbozz Minion Twist Scooter (sample no. 5) and the Y-Volution Y Glider XL (sample no. 6) remained intact, but the deck or connecting components on the bottom of the deck were damaged.

Defective components were identified in one sample during tensile testing

Components may break or become detached when children play with toys; these components have the potential to cause injuries. According to toy safety standards, toys designed for children under 3 years of age must not contain any small parts, as they may cause choking or suffocation. The Micro Mini Micro Deluxe (sample no. 4) is labelled as suitable for children under 3 years of age, but some of the stickers and labels on the chassis broke into small parts during tensile testing and therefore failed to meet certification standards.

3 samples were packaged in thin plastic bags that constituted a choking hazard

Testing showed that the Mesuca Marvel Spider-Sense Spiderman 3 Wheel Scooter (sample no. 7), the Fei Yue 'Extreme Prince' (sample no. 9) and the Avigo Folding Inline Scooter (sample no. 14) were packaged in a plastic bag with an average thickness of less than the required standard of 0.038 mm. Thin plastic bags may cause choking or suffocation when placed over the mouth or nose.

8 samples did not meet labelling standards

The packaging, labels and/or instruction manuals of the Mesuca Marvel Spider-Sense Spiderman 3 Wheel Scooter (sample no. 7), the 21st ScooTer R4E (sample no. 8), the Fei Yue 'Extreme Prince' (sample no. 9), the Mesuca Disney Frozen Multi-Function Scooter (sample no. 10), the ScooTer SSWT-929 (sample no. 11) and **the Razor A2 Kick Scooter (sample no. 15) did not contain all of the required warnings or safety information,** such as "Warning! Protective equipment should be worn", "Not suitable for use on roads", or "This scooter should be used with caution, as a certain level of skill is required to avoid falls or collisions causing injury to the user or third parties".

The Avigo Folding Inline Scooter (sample no. 14) did not label the required warnings correctly, while the Ozbozz Minion Twist Scooter (sample no. 5) did not feature the word "Warning" on the steering tube.

Migration of certain elements - satisfactory performance

We tested all accessible parts in the samples for the migration of 19 different elements in accordance with the EU's EN 71-3 standards. These included aluminium, antimony, arsenic, barium, boron, cadmium, chromium (III), chromium (VI), cobalt, copper, lead, manganese, mercury, nickel, selenium, strontium, tin, organic tin compounds and zinc. According to our tests, all of the samples met the necessary requirements, with none of the models releasing quantities in excess of European standards.

PAH testing

Polycyclic aromatic hydrocarbons (PAHs) are impurities commonly found in plastics, rubber and lubricating oils, and may also be present in products made of these materials. In some European countries, traces of PAHs have been found in tool handlebar grips, bicycle/scooter handlebar grips, sports equipment and toys, most commonly in rubber and soft or dark-coloured plastics. There are more than 100 different PAHs, some of which are known carcinogens. PAHs with a high molecular weight are usually the most toxic, although the health impact depends on the concentration as well as the method and duration of contact.

Hong Kong does not have a maximum limit for the concentration of PAHs in toys or children's products. However, the **European Union has issued PAH restrictions for consumer products and toys in Regulation No. 1272/2013 (Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)), which came into force on 27 December 2015.**

According to research conducted on animals, benzo[a]pyrene, benzo[e]pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene and dibenzo[a,h]anthracene are carcinogenic. The European Union classifies these PAHs as substances that are 'presumed to have carcinogenic potential for humans'. According to REACH regulations, the concentration of these 8 PAHs in rubber/plastic parts that may be chewed or present in parts of toys that can be reasonably expected to come into prolonged or repeated direct contact with the skin during use must not exceed 0.5 mg/kg.

Germany's 'GS Mark' voluntary safety standards place even tougher restrictions on the concentration of PAHs in toys. In addition to restricting the concentration of the 8 PAHs mentioned in the REACH regulations, it also restricts levels of 10 other PAHs (namely benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, phenanthrene and pyrene) and stipulates a maximum total PAH concentration. For toy parts that will come into prolonged contact (longer than 30 seconds) with the skin (e.g. handlebar grips), total levels of these 18 PAHs must not exceed 1 mg/kg, while naphthalene levels must not exceed 1 mg/kg. For toy parts that can be reasonably expected to come into prolonged or repeated short-term contact with the skin (e.g. decorative stickers on the end of handlebar grips), total PAH levels must not exceed 5 mg/kg, while naphthalene levels must not exceed 2 mg/kg.

In order to encourage manufacturers to improve product safety, we tested the levels of **18 PAHs in the parts of the handlebar grips that are intended to come into contact with the skin.** The tests were conducted in accordance with the 'GS 2014:01 PAK' PAH testing specifications issued by the AfPS (German Committee for Product Safety).







Test results

\square			Retail Price [2]	Spec & Info [3]								
Somple	Brand	Product Name & model [1]		Weight (kg)	Age range	Max. load (kg)	Fold- able?	Adjustable T-bar?				
3-wheel scooter												
1	GLOBBER	Primo	\$580	2.4	3Y+	50	-					
2	HTI	Disney Toy Story Move & Groove Scooter	\$399	1.6	3Y+	20	-	-				
3	Avigo	Twisty Scooter	\$200	2.0	3Y+	50	-	-				
4	Micro	Mini Micro Deluxe / MMD003	\$850	2.0	2-5Y	35	-	\checkmark				
5	Ozbozz	Minion Twist Scooter	\$350	1.9	3Y+	20	-	-				
6	Y-Volution	Y Glider XL	\$765	2.7	5-9Y+	50	-	\checkmark				
7	Mesuca	Marvel Spider-Sense Spiderman 3 wheel Scooter / DCA21186-S	\$288	1.8	3Y+	40						
8	21st ScooTer	R4E 🔺	\$380	3.4	6Y+	60						
9	Fei Yue	Extreme Prince, Kids Scooter	\$198	2.5	3Y+	35	-	\checkmark				
10	Mesuca	Disney Frozen Multi-Function Scooter / DXK35-Q ▽	\$390	2.5	3Y+	30	-	\checkmark				
11	ScooTer	SSWT-929 🔻	\$220	2.7	3Y+	40	√	\checkmark				
2-wheel scooter												
12	Zinc	Interceptor Scooter/ZC03660	\$350	3.0	5Y+	50		\checkmark				
13	HTI	Hello Kitty Folding Scooter/ 1436255	\$399	1.9	5Y+	50	V	\checkmark				
14	Avigo	Folding Inline Scooter/13939RD	\$200	2.0	5Y+	50		\checkmark				
15	Razor	A ² Kick Scooter	\$699	2.5	5Y+	65	√	\checkmark				

Mechanico	al & Physic	cal test [4	1]			PAH lev			
Structure & clearances [1][5]	T-bar Strengths [6]	Small components [7]	Packaging & labelling [1][8] [9]		Migration of certain elements [10]	Parts that come into prolonged contact with the skin (mg/kg)	Parts that can be reasonably expected to come into prolonged or repeated short- term contact with the skin (mg/kg)	Overall score	FINAL SCORE [12]
•••••	•••••	•••••	•••••	•••••	•••••		•	•••••	*****
•••••	•••••	•••••	•••••	•••••	•••••	1.2 (1.2)	•	••••	*****
•••••	•••••	•••••	•••••	•••••	•••••	2.2 (1.4)	•	••••	****1
•••••	•••••	••••	•••••	•••••	•••••	0.4 (0.4)	•	•••••	****1
•••••	•••• d	•••••	••••• f	••••	•••••	0.8-2.6 (0.4-1.4)	0.8 (0.2)	••••	****
•••• a	•••• d	•••••	•••••	••••	•••••	0.4 (0.4)	•	•••••	****
eee abc	•••••	•••••	••• fg	••••	•••••	0.2-0.8 (0.8)	•	•••••	***1
•••••	•••••	•••••	●●● ▲fh	•••••	•••••	5.8 (5.8)	•	•••	***
•••• a	●●● d	•••••	●●● fg	•••	•••••	1.2 (1.2)	•	••••	**1
eee ab	●●€ d	•••••	••• f	••(•••••	1.4 (1.4)	•	••••	***
•••• bc	●●€ d	•••••	●● ● fh	•••	•••••	0.4 (0.4)	•	•••••	***
•••••	•••••	•••••	•••••	•••••	•••••	0.6-2.8 (0.2-1.3)	0.8	••••	****1
•••••	•••••	•••••	•••••	•••••	•••••	3.1 (1.4)	3.3 (2.7)	••••	****1
•••••	•••••	•••••	•••• fg	•••••	•••••	0.4-1.6 (0.4)	•	••••	****1
●●●● abc▲	•••••	•••••	0000(f [▲]	••••	•••••	2.3 (0.8)	•	••••	****
				requir	um level red by standards	1 (1)	5 (2)		

Remarks:

More \bullet or \star indicate a better score. The maximum score is 5.

denotes that the corresponding feature is not indicated, or that the product does not have the corresponding feature/design.'--' indicates that the corresponding test was not conducted.

Samples with the same score are listed in alphabetical order (by manufacturer's name)

▲ The stated maximum load of sample nos. 8 and 15 exceeds the maximum load specified in the EN71-1 [1] standards (50 kg). In accordance with these standards, these samples cannot be defined as toys. However, as these products are marketed as suitable for children aged 5/6 or above and children of this age can be expected to use scooters as toys, these products were included in the test for reference purposes only. ▽ Includes parts that can transform the scooter into a 2-wheeled version.

Sample nos. 8 and 11 feature a single rear wheel unit with two wheels. These models function in a similar way to 3-wheeled scooters.

- All samples were labelled as 'Made in China'.
- [2] Retail prices are approximate and were provided by retail agents or obtained by the Consumer Council during a market survey conducted in July 2017. Retail prices may vary between retailers. Some products had been discontinued at the time the market survey was conducted. The retail price shown is the price for which the sample was purchased.
- [3] Specifications were provided by retail agents or obtained from the packaging or measurements conducted by the Consumer Council.
- Tests were conducted in accordance with the EU's EN 71-1 toy safety standards.
- 151 a. The clearance between the wheels and frame was between 5-12 mm (structural improvements required).
 - b. The diameter of the front wheel was less than the required minimum of 120 mm.

c. The diameter of the end of the handle was less than required minimum of 40 mm.

[6] d. In samples 5 and 6, the deck or connecting components on the bottom of the deck were damaged during our strength tests.

In samples 9, 10 and 11, the steering tube was damaged/became dislodged or the locking mechanism became defective during our strength tests.

- e. During our tensile tests, some of the stickers on the frame and other decorative stickers became detached [7] and split into small parts.
- [8] f. The packaging, instruction manual or product did not feature all of the warnings required by the certification standards.

g. The thickness of plastic packaging was less than 0.038 mm, which may cause choking or suffocation when placed over the mouth or nose.

h. The instruction manual did not contain information on how to fold the scooter.

- [9] Weighting of test criteria for mechanical and physical tests:
- Structure and wheel clearance 45% Small components 15% Packaging and labelling Steering tube strength 30% 10% The overall score is calculated using the above weighting criteria. The formula also includes a limit factor that reduces the overall score if a product does not perform well in an important test. [10] Tests were conducted in accordance with the EU's EN 71-3 toy safety standards. All samples met the
- requirements for the migration of 19 different elements.

[11] We tested the levels of 18 PAHs in the handles of each sample. The tests were conducted in accordance with the 'GS 2014:01 PAK' PAH testing specifications issued by the AfPS (German Committee for Product Safety). Indicates that the end of the handles did not feature decorative stickers. As a result, the parts with intended prolonged skin contact were made from the same materials as the parts with foreseeable prolonged skin contact or repeated short-term skin contact, therefore it was only necessary to test the handles once All samples met the EU's REACH requirements for PAH levels (Regulation No. 1272/2013). None of the 8 PAHs

specified in the regulations were detected. In tests of the parts with intended prolonged skin contact, the total PAH concentration of 10 samples exceeded the maximum specified in the 'GS' Mark' standards, with levels ranging from 1.2 mg/kg to 5.8 mg/kg. 8 samples contained naphthalene levels in excess of the GS Mark limit (1 mg/kg).

() The figure in brackets indicates the naphthalene concentration or the specified limit. 65%

5%

[12] Överall score weighting:

Mechanical and physical tests: Migration of certain elements

PAH levels in handle 30%

The overall score is calculated using the above weighting criteria. The formula also includes a limit factor that reduces the overall score if a product does not perform well in an important test.

All handles met REACH standards and no traces of carcinogenic BaP were found

In all samples, none of the 8 PAHs specified in the REACH regulations were detected in any parts of the handle that come into contact with the skin, including the known carcinogen benzo[a]pyrene (BaP).

Small traces of PAHs were found in most samples

Apart from the handle of the Globber Primo (sample no. 1), which did not contain any of the 18 PAHs tested for in this study, the handles of the other 14 samples contained varying levels of PAHs in parts with intended prolonged skin contact and/or parts with foreseeable

prolonged skin contact or repeated short-term skin contact.

In 4 samples (the Micro Mini Micro Deluxe (sample no. 4), the Y-Volution Y Glider XL (sample no. 6), the Mesuca Marvel Spider-Sense Spiderman 3 Wheel Scooter (sample no. 7) and the Scooter SSWT-929 (sample no. 11)), traces of PAHs were detected in parts of the handle with intended prolonged skin contact, but the total concentration did not exceed the GS Mark limit. The handles of the other 10 samples – the Disney Toy Story Move & Groove Scooter (sample no. 2), the Avigo Twisty Scooter (sample no. 3), the Ozbozz Minion Twist Scooter (sample no. 5), the 21st ScooTer R4E (sample no. 8), the Fei Yue 'Extreme Prince' (sample no. 9), the Mesuca Disney Frozen Multi-Function Scooter (sample no. 10), the Zinc Interceptor Scooter (sample no. 12), the HTI Hello Kitty Folding Scooter (sample no. 13), the Avigo Folding Inline Scooter (sample no. 14) and the Razor A2 Kick Scooter (sample no. 15) – contained maximum PAH concentrations of 1.2 mg/kg to 5.8 mg/kg, higher than the limit specified in the GS Mark standards (1 mg/kg).

Traces of naphthalene were found in 14 samples, 8 of which (nos. 2, 3, 5, 8, 9, 10, 12 and 13) contained concentrations higher than the GS Mark limit (1 mg/kg). The maximum naphthalene levels in these samples ranged from 1.2 to 5.8 mg/kg.

Only samples 5, 12 and 13 featured decorative stickers on the ends of the handles, which have the potential to come into contact with children's skin during use. We decided to test whether levels of naphthalene and the 18 PAHs in the GS Mark standards exceeded the specified limit (2 mg/kg and 5 mg/kg respectively) for parts that can be reasonably expected to come into prolonged or repeated short-term contact with the skin. According to the results, the stickers on these three samples all contained traces of PAHs, although concentrations did not exceed the GS Mark limit. Only sample no. 13 contained naphthalene levels that were slightly higher than the specified limit of 2 mg/kg (2.7 mg/kg).

How to reduce the impact of PAHs in toy scooters

When children grip the handles on a scooter, PAHs may be absorbed into the body via the skin. Some of the samples contained naphthalene - a highly volatile substance with a low molecular weight. Naphthalene **may cause skin irritation and dermatitis**, especially in people with sensitive skin. However, in most cases naphthalene absorbed through the skin is not sufficient to cause acute conditions (e.g. jaundice or haemolysis). When inhaled at high concentrations, it may cause headaches, nausea, vomiting and eye irritation.

According to dermatologist Dr. Chan Hau Ngai, a member of the Hong Kong Medical Association, children may be exposed to a range of PAHs when engaging in daily activities. **PAHs and naphthalene can usually cause irritation and dermatitis when they come into contact with the skin.** As skin wounds can increase the amount of PAHs absorbed by the body, parents should avoid allowing their children to play with scooters until wounds have healed. After use, children should wash their hands with warm water or soap to avoid ingesting PAHs when touching food.

Are people with G6PD deficiency more prone to developing symptoms from PAH exposure?

People who suffer from G6PD deficiency (glucose-6-phosphate dehydrogenase deficiency) are at the greatest risk from naphthalene exposure, as it may cause haemolysis. In order to prevent the rupture of red blood cells, patients must never take any medication or come into contact with mothballs and other pesticides that contain naphthalene. Common symptoms in patients who suffer an acute response include fatigue, breathing difficulties and an elevated heart rate. According to the German Federal Institute for Risk Assessment (the BfR), naphthalene poisoning can occur when pharmaceuticals or other products containing naphthalene are inhaled, ingested or come into contact with the skin. Haemolytic anaemia caused by the inhalation of naphthalene vapour usually occurs after exposure to relatively high concentrations of naphthalene, the likes of which is not to be expected with consumer products. According to research conducted by the Danish Environmental Protection Agency, small quantities of naphthalene in rubber or plastic products are unlikely to cause haemolytic anaemia. The levels of naphthalene detected in the scooter handles were much lower than the levels usually found in mothballs or other pesticides used to protect clothing, and are therefore unlikely to result in haemolytic anaemia. Dr. Chan Hau Ngai noted that scooters are usually used outdoors – as the air circulates, it is unlikely that children will inhale high concentrations of naphthalene.

Encouraging manufacturers to reduce PAH levels in toys and children's products

Children may be exposed to a range of different PAHs during daily activities. Over time, it is possible that prolonged exposure may have a detrimental impact on health. In order to reduce the health impact on children, we encourage manufacturers and suppliers to keep up to date with the latest toy regulations and standards in different countries and use materials with no or lower levels of PAHs.

Customs regulations

Toys sold in Hong Kong are subject to the Toys and Children's Products Safety Ordinance and its supplementary provisions. These regulations stipulate that manufacturers, importers and suppliers of toys must comply with all applicable requirements contained in one of the three sets of toy standards listed in Schedule 1: (1) European BS EN 71 standards; (2) ASTM F963-11 standards issued by ASTM International; and (3) International ISO:8124 standards. In response to this test report, the Hong Kong Customs and Excise Department has promised to investigate the products that failed to comply with European standards. The Hong Kong customs authorities take safety issues seriously – they frequently investigate complaints from consumers and conduct on-site inspections of retailers to purchase samples and send them to government laboratories for testing. Enforcement measures are used to combat non-compliance.

Feedback from manufacturers

The manufacturer of HTI scooters (sample nos. 2 and 13) stated that its scooter models comply with EN 71-1 and EN 71-3 regulations as well as the REACH regulations on PAH concentrations. A test report was provided as evidence. According to the manufacturer, our tests prove that sample nos. 2 and 13 comply with the Toys and Children's Products Safety Ordinance, and that the materials used in the handlebar grips comply with European PAH regulations.

The agent of Micro scooters (sample no. 4) stated that its scooters have been verified by numerous laboratories as compliant with EN 71-1 standards. The company claims that the stickers which became detached from the chassis were an isolated incident and that the manufacturer has strict testing standards for all manufacturing processes. According to the agent, the product has undergone numerous tests since it went on sale several years ago, none of which identified areas of non-compliance. With regard to the decorative stickers, the company claimed that these were provided as free gifts and that they are no longer included with the product.

According to the manufacturer of Ozbozz scooters (sample no. 5), laboratory tests have verified that its scooter models comply with EN 71-1 and EN 71-3 regulations as well as the REACH regulations on PAH concentrations, and that its model is therefore compliant with the Toys and Children's Products Safety Ordinance. A test report was provided as evidence. The company did not agree with our test report and stated that the failed EN 71-1 steering tube strength test was the result of different testing methods. It also claimed that the product has undergone numerous lab tests since it went on sale several years ago, none of which identified areas of non-compliance. According to the manufacturer, our PAH tests prove that the handlebar grips of sample no. 5 comply with the EU's PAH regulations and Hong Kong standards. It also claims that the GS Mark PAH standards are too stringent. (We would like to point out that Hong Kong does not have a maximum limit for the concentration of PAHs in toys or children's products.)

In response to our test report, the manufacturer of Mesuca scooters (samples no. 7 and 10) stated that it would improve the design of its products to ensure that they comply with European toy safety requirements. It also promised to purchase safer materials to reduce the concentration of PAHs in its products.

The agent of 21st ScooTer (sample no. 8) promised to update its Chinese instruction manual and provide an English version to ensure compliance with European toy safety standards. It also claimed that the manufacturer had not been informed of any plans by the US or European countries to implement the GS 2014:01 PAK standards issued by the German Product Safety Commission, therefore reductions in PAH concentrations were unlikely.

PRECAUTIONS

Location

- Scooters should be used in a safe location away from roads.
- Avoid riding scooters in busy places (e.g. pavements or shopping malls), as this may cause an accident.
- Do not use scooters on slippery or uneven surfaces.

Before purchase

- Check that the scooter comes with an instruction manual and is properly labelled. Choose your scooter based on the age range, maximum load and other specifications stated on the product.
- Two-wheeled scooters require more advanced balancing skills. Choose the correct type of scooter based on your child's ability.

During use

- Wear suitable protective equipment such as a helmet, elbow pads, knee pads and trainers. Long sleeves and trousers help to reduce the risk of injury if your child falls off the scooter.
- Do not allow your child to jump onto the scooter. If your child loses balance, they should step off the scooter immediately.
- Do not use the scooter on slopes, as the rear brake is not designed for downhill use and therefore is not able to stop the scooter if it is going down a slope.
- Supervise your child at all times and keep an eye on pedestrians and surrounding objects to prevent your child from causing an injury to themselves or others.
- Tell your child to wash their hands with warm water and soap immediately after using the scooter to prevent exposure to PAHs, heavy metals and other harmful substances.

Care and maintenance

- Inspect the scooter before use and check that all screws are tight.
- Regularly inspect components and the deck for signs of wear or damage.
- After use, use a damp cloth to wipe the handlebar grips, deck and wheels.



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