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GS-Certification Process Mandatory PAH Testing GS標誌認證強制增加PAH 測試項目

From 1st April 2008, the testing for Polycyclic Aromatic Hydrocarbons (PAH) will become mandatory according to the document ZEK 01-08, which was decided by the board for technical work equipment and consumer products (AtAV) dated on 20th November 2007.

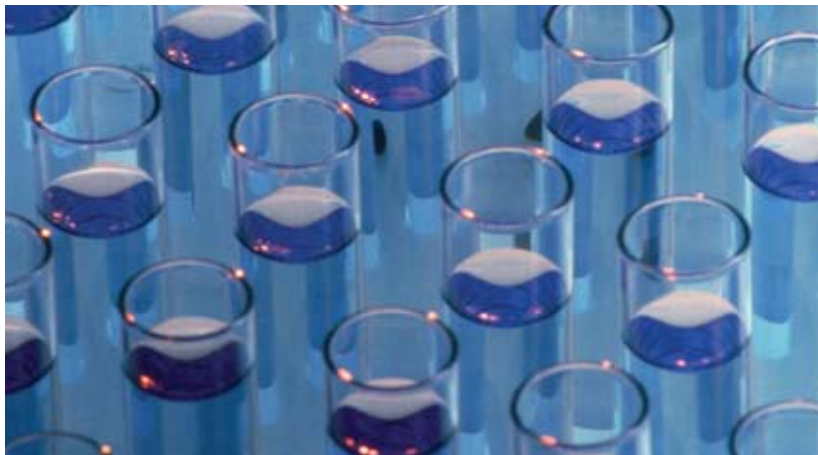
自2008年4月1日起，GS產品認證將根據德國技術設備及消費品委員會(AtAV)於2007年11月20日所發表的文件ZEK 01-08，強制加入PAH測試。

TÜV SÜD Group

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Potential cancer-causing organic chemicals called Polycyclic aromatic hydrocarbons (PAH) pose a threat to people and the environment, and having your products tested for harmful PAH shows you have a long term perspective and care about end users. TÜV SÜD provides comprehensive testing to ensure compliance.

有機致癌物質—多環芳香烴化合物 (PAH) 給人類和環境造成了很大的威脅。對產品進行PAH測試足以顯出您的長遠發展觀和對最終用戶的關心。TÜV 南德意志集團可以為您提供全面的測試服務，以確保您的產品完全符合相關指令。



How PAH form and where they are found

PAH are formed during processing and incomplete combustion of coal, oil, gas, wood, garbage or other organic substances, such as tobacco and charbroiled meat. Most people are exposed through food and ambient or indoor air. PAH usually occur naturally, but they can be manufactured as individual compounds for research purposes. A few PAH are used in medicines and to make dyes, plastics and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote and roofing tar. Some industries manufacture PAH for use in production of PVCs, plasticisers and dyes.

PAH是如何形成的？

一般存在於哪些地方？

多環芳香烴化合物(PAH)是煤炭、石油、天然氣、木材、垃圾或其他有機物，如煙草和烤肉，在處理過程中由於不完全燃燒而形成的。大多數人通過食物，環境及室內空氣接觸PAH。PAH通常都是自然形成的，但也有為了研究應用目的而人工合成。在一些藥品、染料、塑膠、殺蟲劑和道路瀝青中都含有PAH，也可以在其他一些天然物質，如原油、煤炭、煤焦油、木餾油及油氈瀝青中，發現它們的蹤跡。一些行業利用焦油或其混合物作為塑化劑以製造橡膠和塑膠，以降低成本。



Exceptional services and benefits

- Comprehensive high quality testing and analysis reports based on up-to-date knowledge of PAH accepted guidelines and standards
- We provide expert opinions and judgment on test grouping
- Our labs and experts are capable of testing to tougher limits (detection limit of 0.1ppm)
- Testing guidelines
- Dedicated chemical testing experts in Asia

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一站式服務的優點所在

- 根據對有關PAH測試準則及標準的最新認識提供全面優質的測試服務和分析報告
- 對測試分組提供專家指導和意見
- 我們的實驗室和專家們都能承受高難度的測試工作 (測定極限低於0.1ppm)
- 測試準則
- 分佈在亞洲的化學測試專家

Limits for PAH in Products

多環芳香烴化合物 (PAH) 及苯駢 (ghi) 芘 (BaP) 含量指標

Parameter		Beno[a]pyren mg/kg 苯駢(a)芘含 量限值	Sum 16 PAH (EPA) mg/kg 16種PAH總含 量限值
Category 1 1類	Material in direct contact with food, or materials indented to be put in the mouth and toys for children and toys for children aged < 36 months 與食物接觸類材類及三歲以下兒童可放入口中產品 / 部件	Not detectable 不得檢出 (<0.2)*	Not detectable 不得檢出 (<0.2)*
Category 2 2類	Material with foreseeable contact to skin for longer than 30 seconds (long-term skin contact) and toys not covered by category 1 與皮膚接觸超過30秒的塑膠類消費產品及其他玩具產品及部件	1	10
Category 3 3類	Material with foreseeable contact to skin up to 30 seconds (short term skin contact) or without skin contact 與皮膚接觸低於30秒或不與皮膚接觸塑膠類產品 / 部件	20	200

* If the limits of category 1 are surpassed but the limits of category 2 still met, the confirmation of suitability of contact with food stuff or the oral mucosa can be verified by an additional migration test of the PAH components according to DIN EN 1186 and 64 LFBF 80.30-1. The results of the migration test shall be evaluated according to law criteria for foodstuff.
如第一類產品含量超過限制而在第二類產品含量限制之內，對食品或口腔黏液的適用性確認還可以根據DIN EN 1186和64 LFBF 80.30-1的額外PAH元件遷移測試作確認。遷移測試的結果將依照法律對食品的要作評估。



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Most harmful PAH listed by the Environmental Protection Agency, USA
美國環保署列出的多環芳香烴化合物 (PAH)

Naphthalene 萘	Phenanthrene 菲	Benzo(a)anthracene 苯駢(a)蒽	Benzo(a)pyrene (BaP) 苯駢(a)芘
Acenaphthylene 芴	Anthracene 蒽	Chrysene 屈	Dibenzo(ah)anthracene 苯駢(a,h)蒽
Acenaphthene 二氫芴	Fluoranthene 熒蒽	Benzo(b)fluoranthene 苯駢(b)熒蒽	Benzo(ghi)perylene 苯駢(ghi)芘
Fluorine 芴	Pyrene 芘	Benzo(k)fluoranthene 苯駢(k)熒蒽	Indeno(123-cd)pyrene 茛駢(123-cd)芘

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Established in Germany 140 years ago, TÜV SÜD is one of the world's leading technical services companies offering knowledge services, inspections, tests, expert opinions, certification and training. Approximately 13,300 employees at over 600 locations worldwide provide technology, system and know-how optimization.

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