

## Test Report

1 April, 2019

Type of Product : Artline PERMANENT MARKERS EK-041T  
<Object:Ink> (Black)(Blue)(Red)(Green)(Brown)(Orange)(Purple)(Yellow)

Test Item	Colour	Result (unit mg/kg)	Minimum limit of determination	Testing Date
a) Lead and lead compounds	All colours	Not detected	2	21 February, 2019 - 27 February, 2019
b) Cadmium and cadmium compounds	All colours	Not detected	2	21 February, 2019 - 27 February, 2019
c) Mercury and mercury compounds	All colours	Not detected	2	21 February, 2019 - 27 February, 2019
d) Hexavalent chromium compounds	7 colours (except Black)	Not detected	8	21 February, 2019 - 27 February, 2019
	Black	Not detected	8	4 March, 2019 - 13 March, 2019
e) PBBs/PBDEs	All colours	Not detected	5	21 February, 2019 - 27 February, 2019
f) DBP	All colours	Not detected	50	21 February, 2019 - 27 February, 2019
g) BBP	All colours	Not detected	50	21 February, 2019 - 27 February, 2019
h) DEHP	All colours	Not detected	50	21 February, 2019 - 27 February, 2019
i) DIBP	All colours	Not detected	50	21 February, 2019 - 27 February, 2019

(Unit; mg/kg=ppm)

Analysis company : Pb, Cd, Hg, PBBs/PBDEs, DBP, BBP, DEHP, DIDP - SGS-CSTC [Approved Signatory : Dora Hu]  
Cr (VI) <7colours (except Black)> - SGS-CSTC [Approved Signatory : Dora Hu]  
Cr (VI) < Black> - SGS Japan [Lab Manager : Yukihiro Ouchi]

		Pretreatment:	Analysis method:
a),b)	<All colours>	IEC 62321-5 : 2013	ICP-OES
c)	<All colours>	IEC 62321-4 : 2013+AMD1:2017	ICP-OES
d)	<7colours (except Black)>	IEC 62321-7-2:2017	UV-Vis
	< Black>	Water extraction (The Analysis of Cr(VI) has been taken removal process of element interference.)	UV/VIS
e)	<All colours>	IEC 62321-6:2015	GC-MS
f),g),h),i)	<All colours>	IEC 62321-8:2017	GC-MS

note) • A sample completely dissolved in preprocessing operation and performed quantitative analysis. (Lead,Cadmium,Mercury)  
“Not detected” means under the minimum limit of determination.  
• Black ink contain chromium compounds,dyestuff (Trivalent chromium, not Hexavalent chromium).  
Please note that test result by X-ray fluorescence spectrometer shows total chromium value.



Shachihata Inc



Yukihiro Shibagaki Quality Assurance Gr.