

## Test Report

3 July, 2023

Type of Product : Artline PERMANENT MARKERS

- <Object:Ink>
- EK-041T (Black)(Blue)(Red)(Green)(Brown)(Orange)(Purple)(Yellow)
  - EK-250N (Black)(Blue)(Red)(Green)(Brown)(Orange)(Purple)(Yellow)
  - EK-725 (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	19 June, 2023 - 20 June, 2023
b) Cadmium and cadmium compounds	All colours	Not detected	2	19 June, 2023 - 20 June, 2023
c) Mercury and mercury compounds	All colours	Not detected	2	19 June, 2023 - 20 June, 2023
d) Hexavalent chromium compounds	7 colours (except Black)	Not detected	8	19 June, 2023 - 20 June, 2023
	Black	Not detected	8	5 June, 2023 - 14 June, 2023
e) PBBs/PBDEs	All colours	Not detected	100	19 June, 2023 - 20 June, 2023
f) DBP	All colours	Not detected	100	19 June, 2023 - 20 June, 2023
g) BBP	All colours	Not detected	100	19 June, 2023 - 20 June, 2023
h) DEHP	All colours	Not detected	100	19 June, 2023 - 20 June, 2023
i) DIBP	All colours	Not detected	100	19 June, 2023 - 20 June, 2023

(Unit; mg/kg=ppm)

Analysis company : Shachihata Inc. Analysis Center

		Pretreatment:	Analysis method:
a),b)	<All colours>	IEC 62321-5	ICP-OES
c)	<All colours>	IEC 62321-4	ICP-OES
d)	<7colours (except Black)>	IEC 62321-7-2	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	GC-MS
f),g),h),i)	<All colours>	IEC 62321-8	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

  
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