



TEST REPORT

Reference No. : WTF21F09098459C
Applicant : Mid Ocean Brands B.V.
Address : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer..... : 104901
Sample Name..... : Ball pen
Model No...... : KC6217, KC6725, MO7318, MO9481
Test Requested..... : 1) Determination of Lead content in the submitted sample in accordance with REACH regulation Annex XVII Entries 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628
2) Determination of Cadmium content in the submitted sample in accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No. 835/2012 and (EU) 2016/217
3) As specified by client, determination of the released formaldehyde content in submitted sample
Test Method : Please refer to next page (s)
Test Conclusion : Please refer to next page (s)
Date of Receipt sample..... : 2021-09-15
Date of Test..... : 2021-09-15 to 2021-09-23
Date of Issue : 2021-09-23
Test Result..... : Please refer to next page (s)
Note : As specified by client, only test the designated sample.

Remarks:

The results shown in this test report refer only to the sample(s) tested; this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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**Test Result:****1) Lead (Pb)**

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.1+No.2+No.3	No.4+No.5+No.6	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.7+No.15+No.32	No.8+No.24+No.35	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.9+No.25	No.10+No.20+No.26	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.11+No.12	No.13+No.14+No.19	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.16+No.17+No.18	No.21+No.23	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--

Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.22+No.33+No.34	No.27+No.28+No.29	
Lead(Pb)	2	ND*	ND*	500
Conclusion	--	Pass	Pass	--



Test Item	LOQ (mg/kg)	Results (mg/kg)		Limit (mg/kg)
		No.30+No.31		
Lead(Pb)	2	ND*		500
Conclusion	--	Pass		--

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than LOQ)
- (3) LOQ = Limit of quantitation
- (4) Limit of Lead was quoted from REACH regulation Annex XVII Item 63 (EC) No. 1907/2006 and the amendment No. 836/2012 and (EU) 2015/628.
- (5) "*" = Results are calculated by the minimum weight of mixed components.

2) Cadmium (Cd)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.1+No.2+No.3	No.4+No.5+No.6
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.8+No.24+No.35	No.9+No.25
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.11+No.12	No.13+No.14+No.19
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.16+No.17+No.18	No.22+No.33+No.34
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass



Test Item	LOQ (mg/kg)	Results (mg/kg)	
		No.27+No.28+No.29	No.30+No.31
Cadmium(Cd)	2	ND*	ND*
Conclusion	--	Pass	Pass

Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than LOQ)
- (3) LOQ = Limit of quantitation
- (4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

Category	Limit (mg/kg)
Wet paint	100
Surface coating	1000
Plastic	100
Metal parts of jewellery and hair accessories	100

- (5) "*" = Results are calculated by the minimum weight of mixed components.

3) Formaldehyde

Test Method: With reference to EN717-3:1996, analysis was performed by UV-VIS

Test Item	Unit	Result	LOQ	Client's Limit
		No.10+No.20+No.26		
Formaldehyde (CH ₂ O)	mg/kg	32*	10	80
Conclusion	--	Pass	--	--

Note:

- ND = Not Detected or lower than limit of quantitation
- mg/kg =milligram per kilogram=ppm
- LOQ = Limit of quantitation
- "*" = Results are calculated by the minimum weight of mixed components.

Test Specimen Description:

- No.1: Black plastic cap
- No.2: Dark grey plastic barrel
- No.3: Black plastic clip
- No.4: Dark grey plastic cap
- No.5: White plastic end
- No.6: Off-white plastic end
- No.7: Silvery metal spring
- No.8: White plastic refill

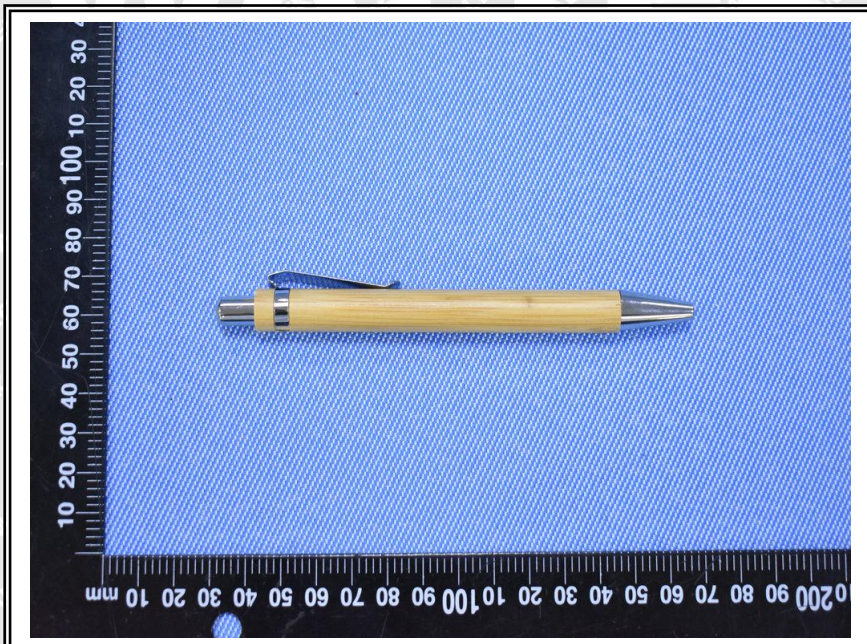


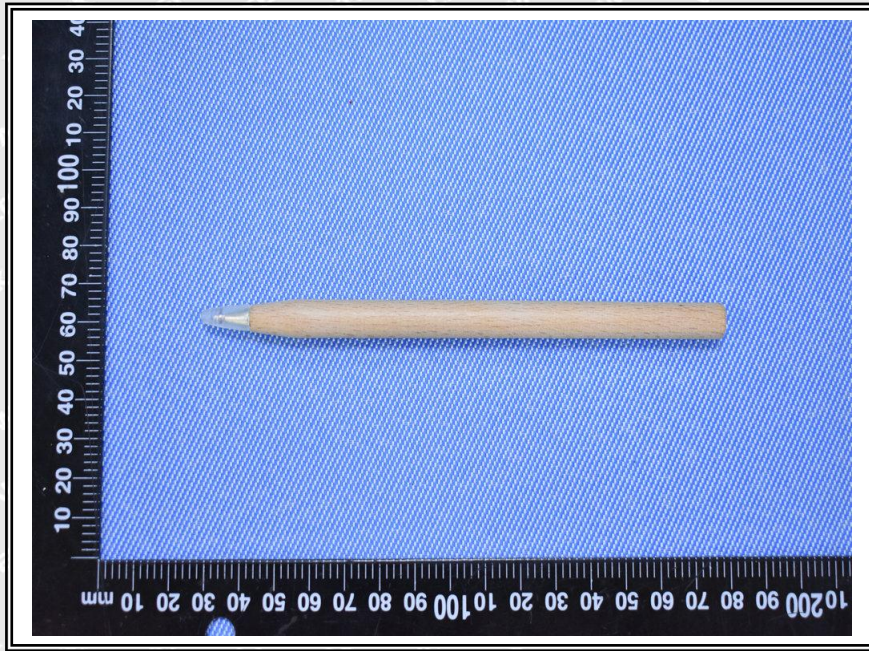
- No.9: Blue ink
- No.10: Brown bamboo barrel
- No.11: White plastic cap with silvery plating
- No.12: White plastic cap with silvery plating
- No.13: White plastic end
- No.14: Off-white plastic end
- No.15: Silvery metal spring
- No.16: White plastic refill
- No.17: White plastic refill
- No.18: Off-white plastic end
- No.19: Black plastic barrel
- No.20: Brown bamboo barrel
- No.21: Silvery metal clip
- No.22: Semi-transparent plastic cap
- No.23: Silvery metal cap
- No.24: Transparent plastic refill
- No.25: Black ink
- No.26: Brown wooden barrel
- No.27: Semi-transparent plastic cap
- No.28: Blue soft plastic tube
- No.29: Semi-transparent plastic barrel
- No.30: Blue plastic barrel
- No.31: Semi-transparent plastic clip
- No.32: Silvery metal spring
- No.33: Off-white plastic end
- No.34: Blue plastic end
- No.35: White plastic refill

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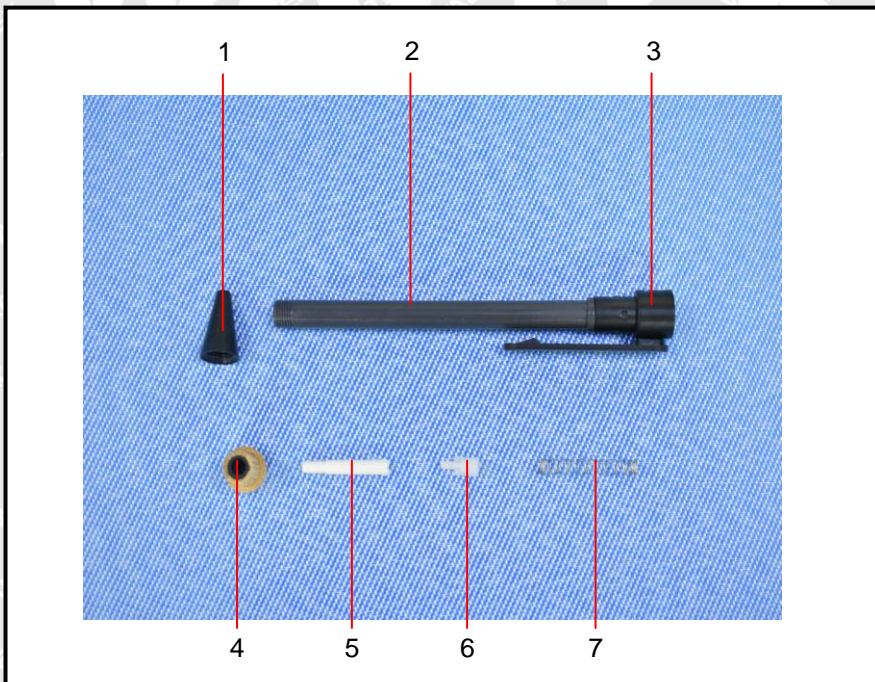
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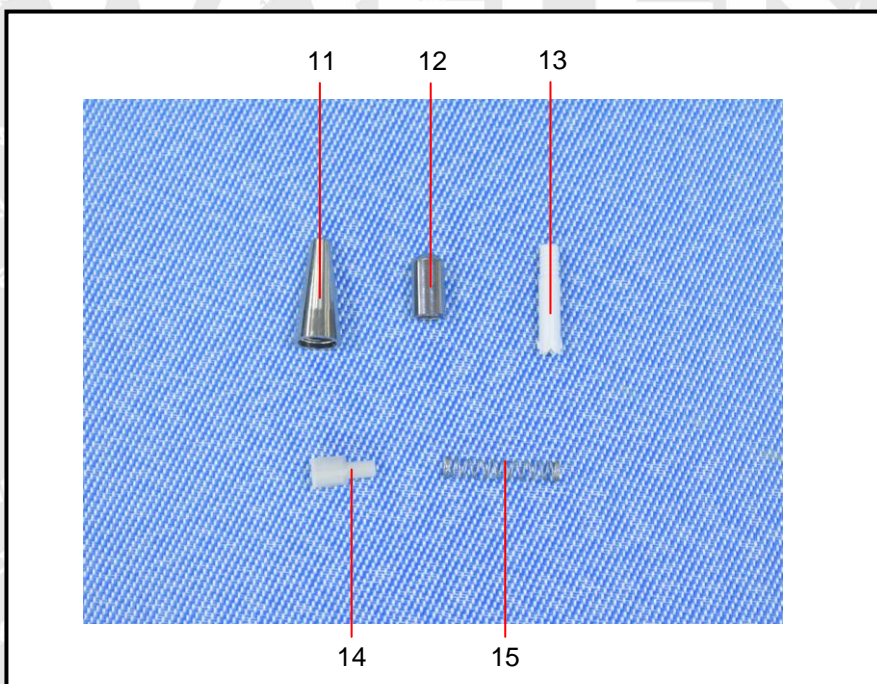
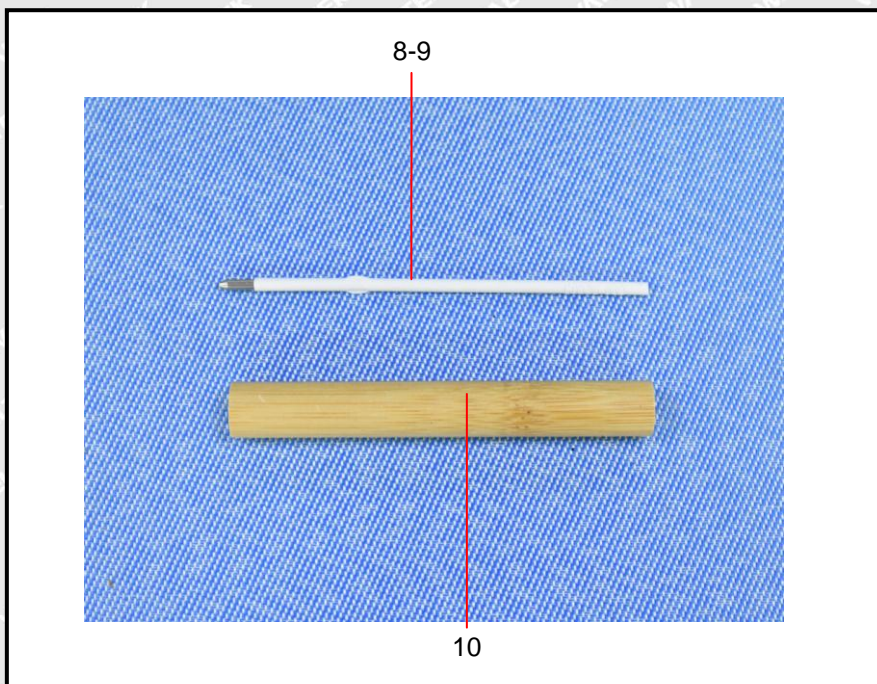


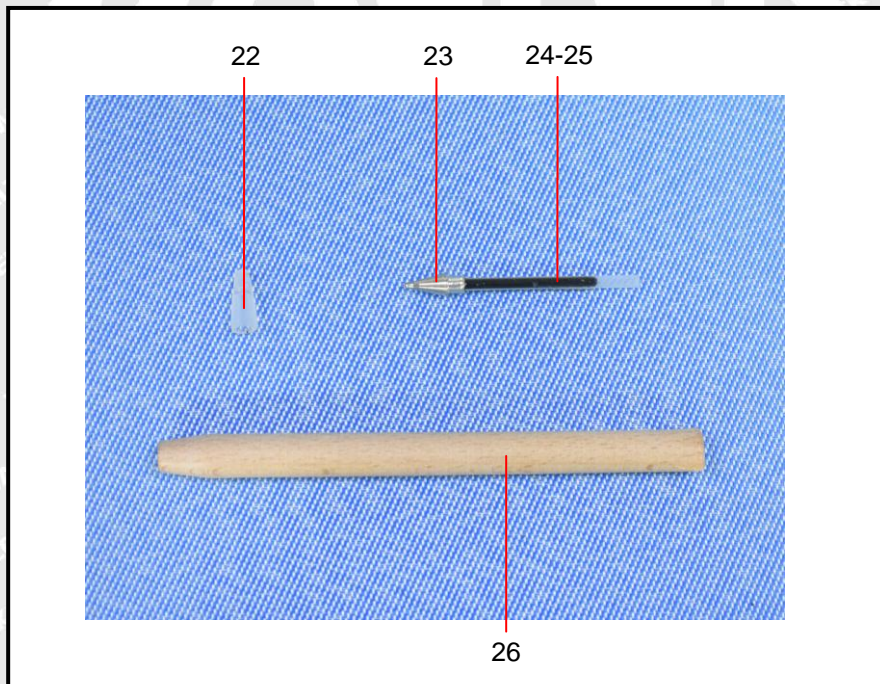
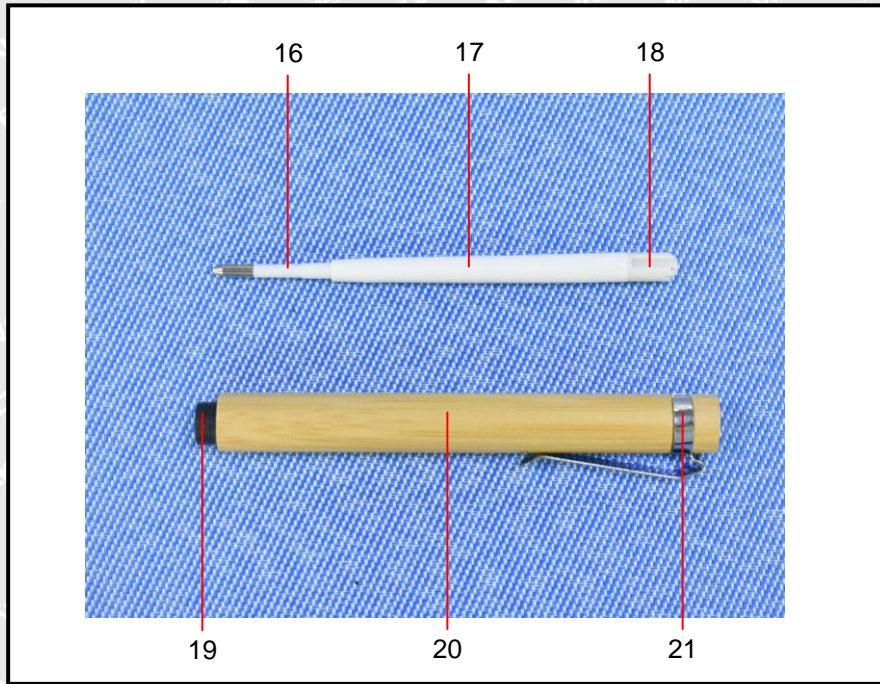


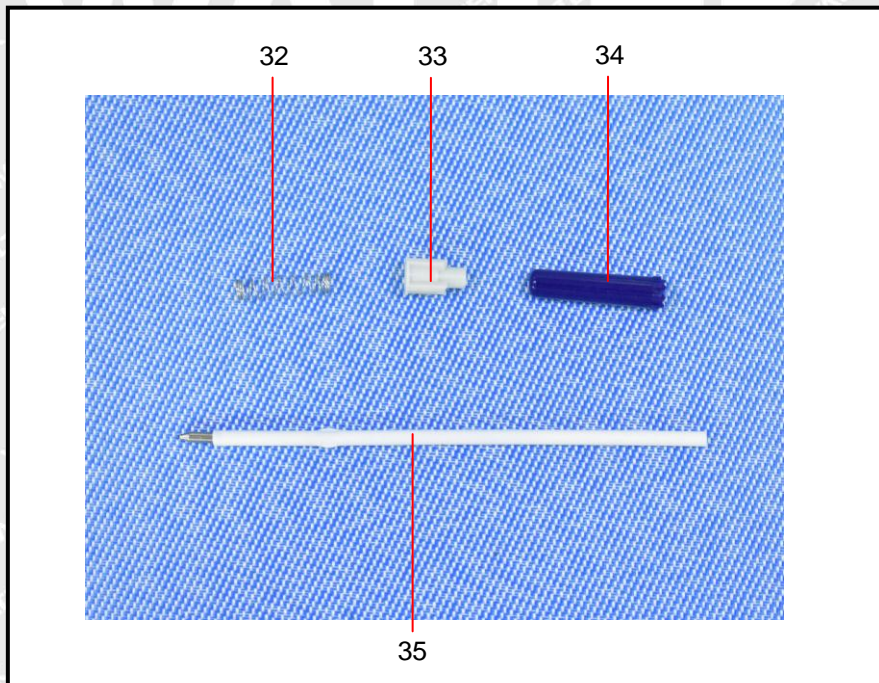
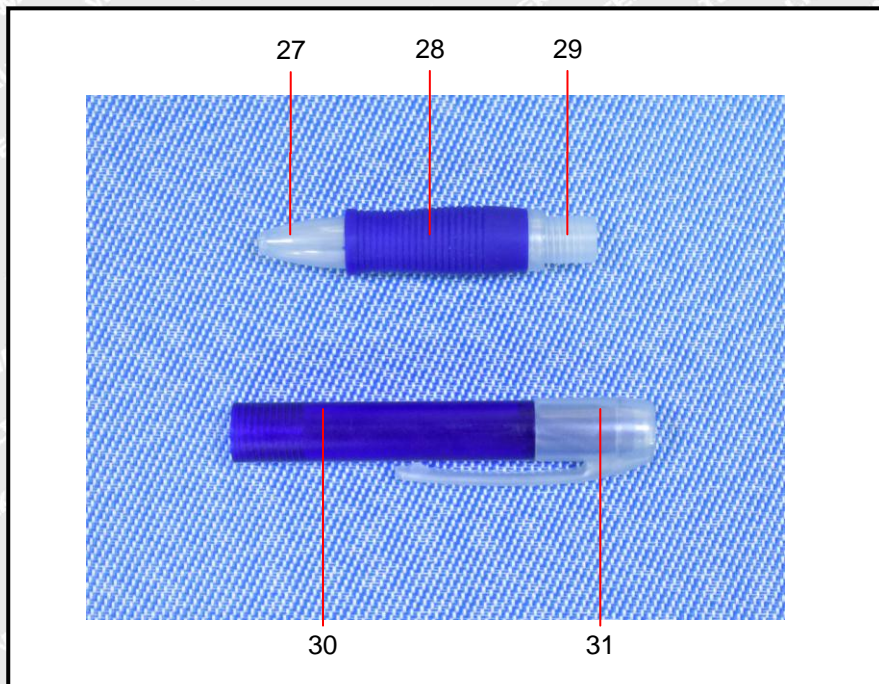


Photographs of parts tested:









==== End of Report ====