



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Reference No. : WTF18F08121853A1C

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, Biodegradable plastic ball pen, 4 ink color ball pen, Ball pen with rubber grip, Wooden ball pen, Ball pen with hand top, Ball pen in metallic finish, Bamboo ball pen, Ball pen with highlighter, Set of ball pen and mechanical pen

Model No. : IT3361, IT3780, IT3888, KC5000, KC5116, KC6217, KC6725, KC6726, MO7203, MO7256, MO7318, MO7440, MO7620, MO8111, MO9483, MO9484, MO3361

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 free and hydrolysed 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 : 2018-08-23 & 2018-10-23 & 2018-11-22

Date of Test : 2018-08-23 to 2018-11-23

Date of Issue : 2018-11-26

Test Result : Please refer to next page (s)

Note : The test points were selected by the applicant.

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 reporter and reviewer.

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Compiled by:

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Approved by:



Ding Zhang

Ding Zhang /Lab Manager

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

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

Test Item	MDL (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	ND	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)						Limit (mg/kg)
		No.7	No.8	No.9	No.10	No.11	No.12	
Lead(Pb)	2	ND	ND	ND	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)						Limit (mg/kg)
		No.13	No.14	No.15	No.16	No.17	No.18	
Lead(Pb)	2	ND	170	62	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)						Limit (mg/kg)
		No.19	No.20	No.21	No.22	No.23	No.24	
Lead(Pb)	2	ND	ND	ND	ND	46	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)						Limit (mg/kg)
		No.25	No.26	No.27	No.28	No.29	No.30	
Lead(Pb)	2	ND	ND	ND	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)						Limit (mg/kg)
		No.31	No.32	No.33	No.34	No.35	No.36	
Lead(Pb)	2	ND	ND	ND	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	Pass	--

Test Item	MDL (mg/kg)	Results (mg/kg)					Limit (mg/kg)
		No.37	No.38	No.39	No.40	No.41	
Lead(Pb)	2	ND	ND	ND	ND	ND	500
Conclusion	--	Pass	Pass	Pass	Pass	Pass	--

**Note:**

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (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.

2) Cadmium (Cd)

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

Test Item	MDL (mg/kg)	Results (mg/kg)				
		No.1	No.5	No.7	No.9	No.12
Cadmium(Cd)	2	ND	ND	ND	ND	ND
Conclusion	--	Pass	Pass	Pass	Pass	Pass

Test Item	MDL (mg/kg)	Results (mg/kg)				
		No.13	No.16	No.18	No.20	No.22
Cadmium(Cd)	2	ND	ND	ND	ND	ND
Conclusion	--	Pass	Pass	Pass	Pass	Pass

Test Item	MDL (mg/kg)	Results (mg/kg)				
		No.23	No.26	No.27	No.28	No.29
Cadmium(Cd)	2	ND	ND	ND	ND	ND
Conclusion	--	Pass	Pass	Pass	Pass	Pass

Test Item	MDL (mg/kg)	Results (mg/kg)				
		No.30	No.31	No.32	No.33	No.34
Cadmium(Cd)	2	ND	ND	ND	ND	ND
Conclusion	--	Pass	Pass	Pass	Pass	Pass

Test Item	MDL (mg/kg)	Results (mg/kg)				
		No.35	No.36	No.37	No.38	No.41
Cadmium(Cd)	2	ND	ND	ND	ND	ND
Conclusion	--	Pass	Pass	Pass	Pass	Pass

**Note:**

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (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

3) Formaldehyde

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

Test Item	Unit	Result		MDL	Client's Limit
		No.2	No.8		
Formaldehyde (CH ₂ O)	mg/kg	ND	ND	10	80
Conclusion	--	Pass	Pass	--	--

Note:

- ND = Not detected or less than the method detection limit
- mg/kg =milligram per kilogram=ppm
- MDL= Method Detection Limit

**Test Specimen Description:**

- No.1: Transparent plastic cap
- No.2: Beige wooden barrel
- No.3: Silvery metal cap
- No.4: Black ink
- No.5: White plastic cap with silvery plating
- No.6: Silvery metal spring
- No.7: Black plastic sleeve
- No.8: Beige wooden barrel
- No.9: White plastic refill
- No.10: Blue ink
- No.11: Silvery metal clip
- No.12: Black soft plastic cap
- No.13: Black plastic sleeve
- No.14: Silvery metal tip
- No.15: Golden metal opening
- No.16: Transparent plastic refill
- No.17: Black core
- No.18: Red plastic cap
- No.19: Brown paper barrel
- No.20: White plastic refill
- No.21: Silvery metal end
- No.22: White plastic cap with silvery coating
- No.23: Black plastic barrel with blue coating
- No.24: Red ink
- No.25: Green ink
- No.26: Transparent red plastic barrel
- No.27: Transparent blue plastic button
- No.28: Transparent green plastic button
- No.29: Transparent black plastic button
- No.30: Transparent plastic cap
- No.31: Red soft plastic grip
- No.32: Dark red plastic cap
- No.33: Orange plastic cap
- No.34: Orange-white soft plastic grip
- No.35: Orange plastic cap
- No.36: Neon orange soft plastic grip
- No.37: Transparent plastic shell
- No.38: Transparent orange plastic cap
- No.39: White felt with orange ink
- No.40: Orange ink
- No.41: White plastic barrel



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Sample photo:



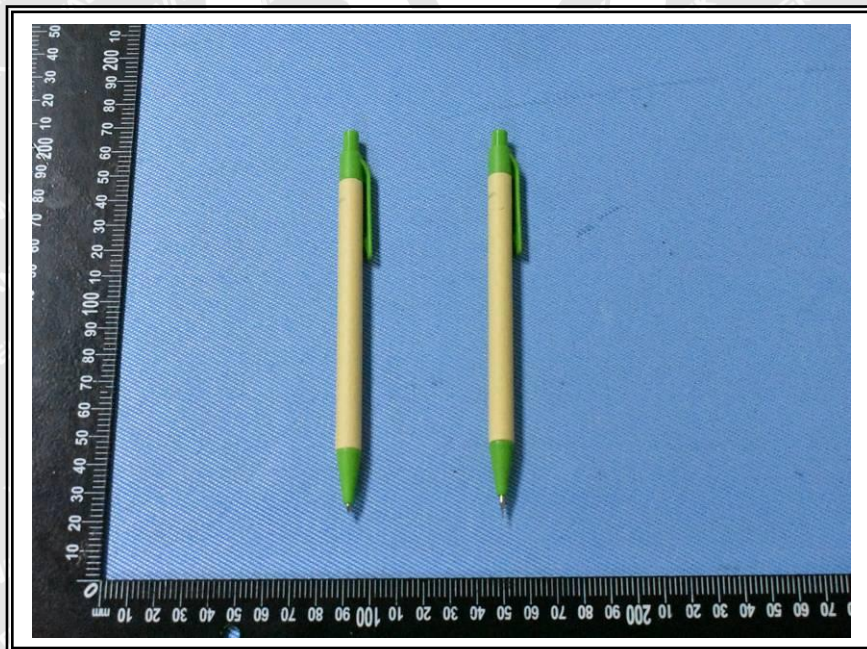


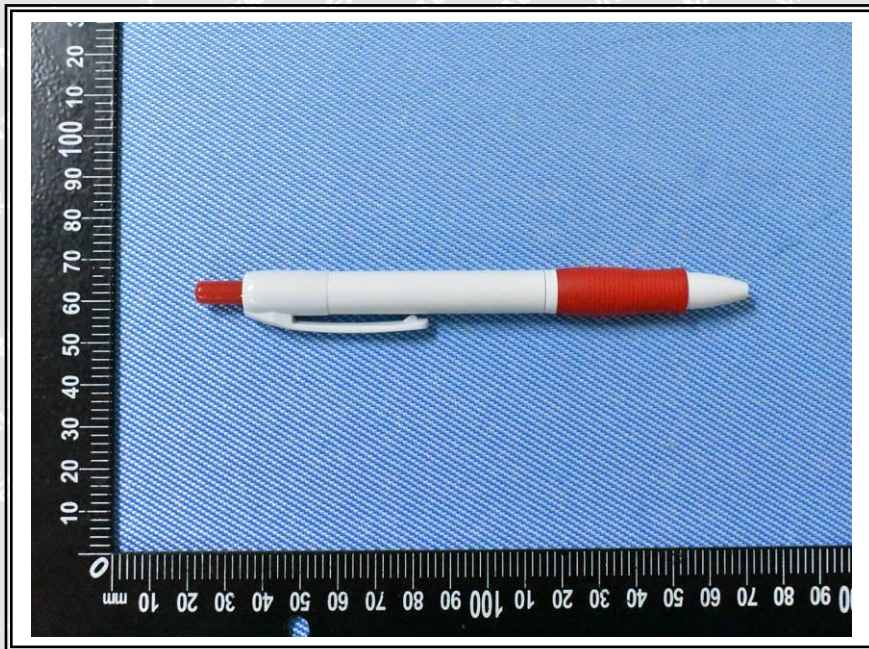


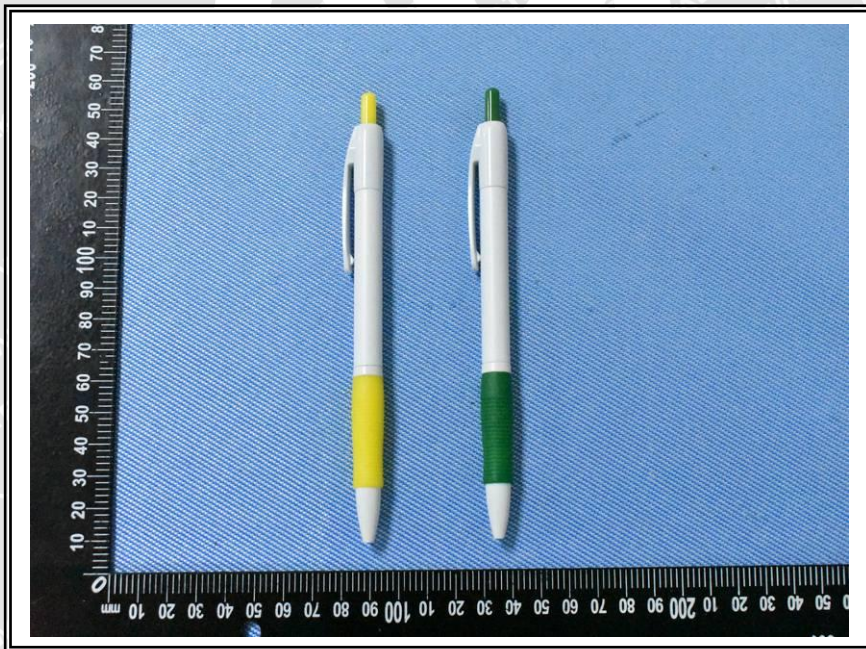
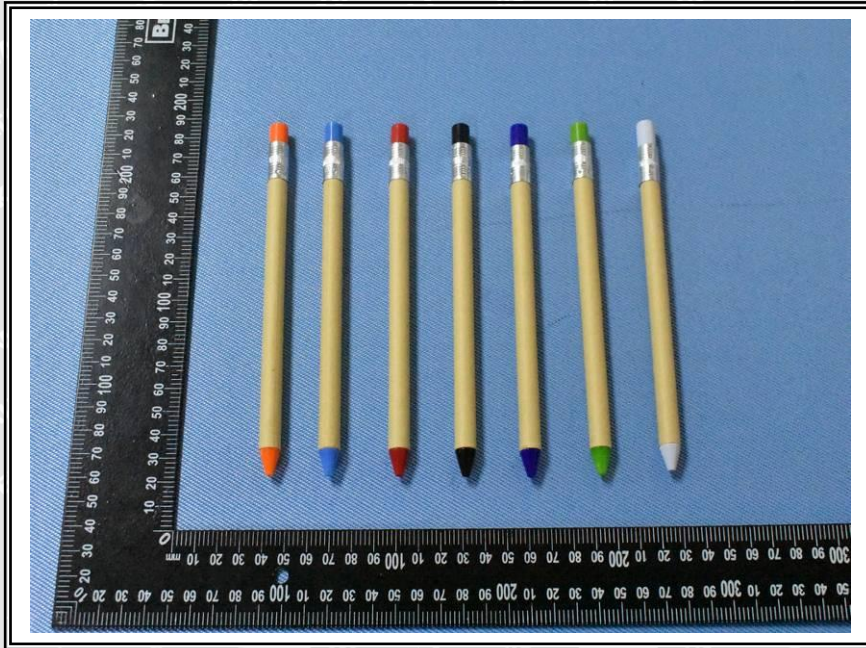










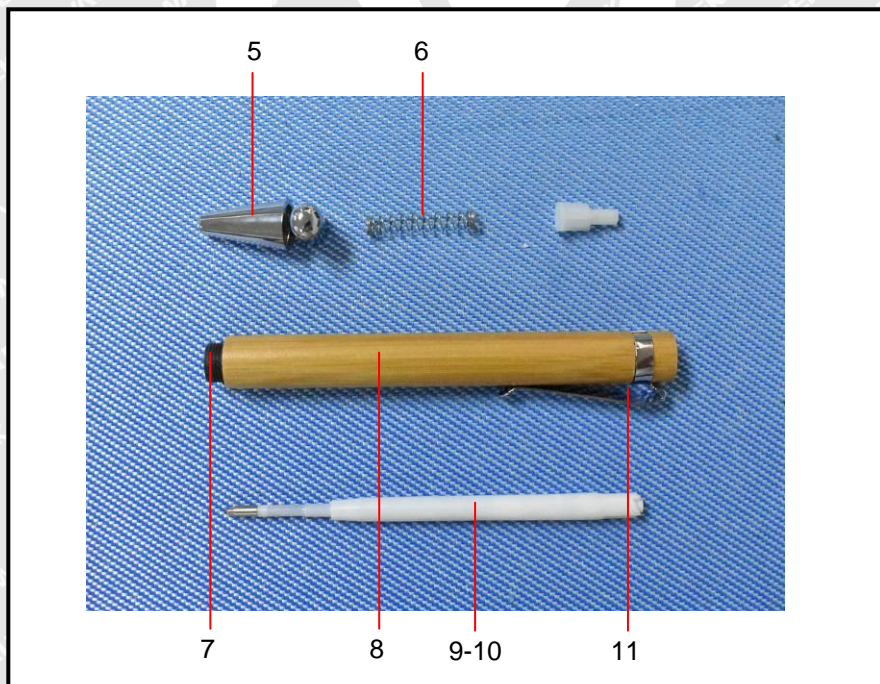
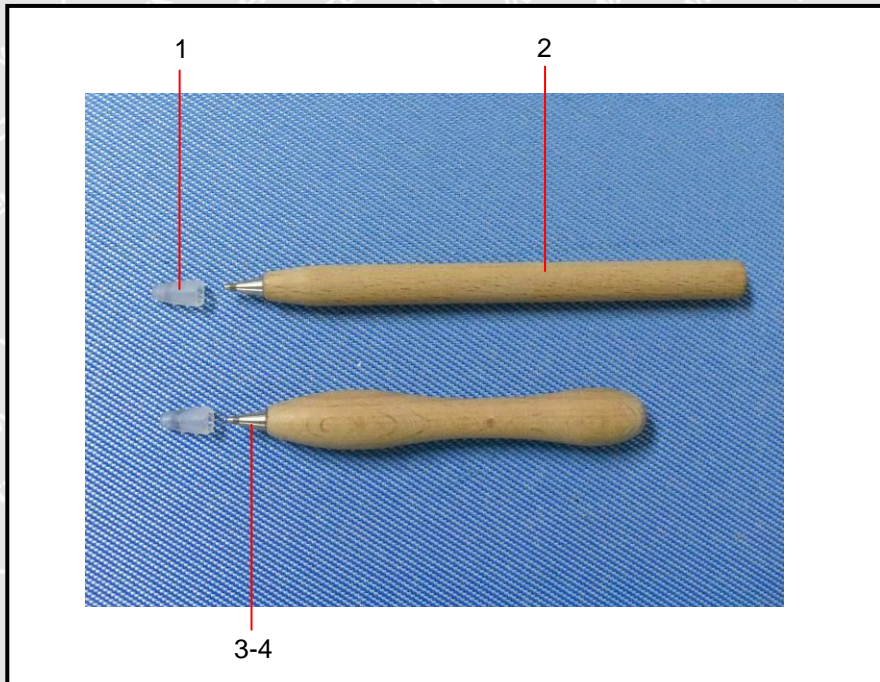


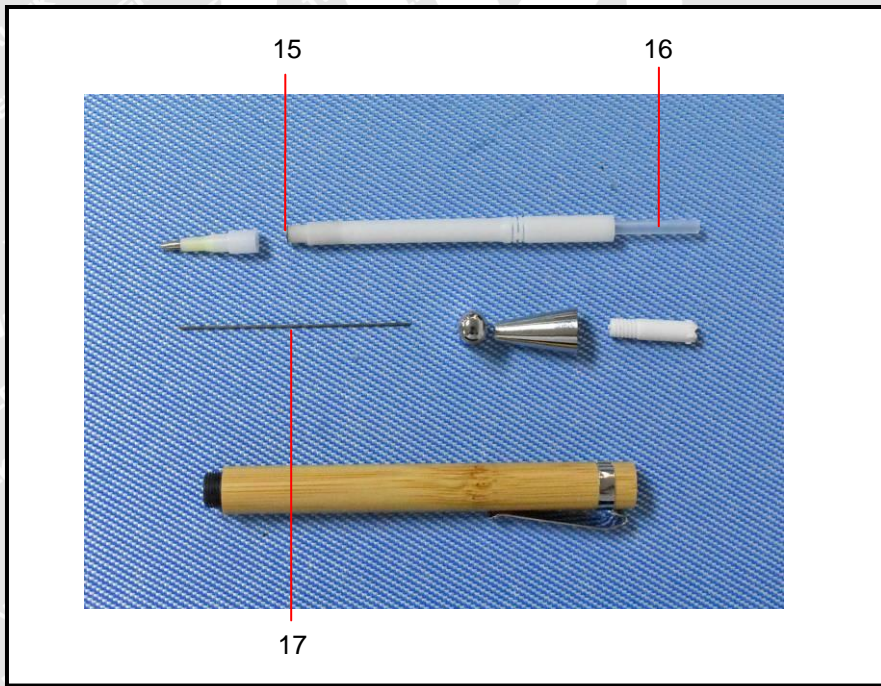
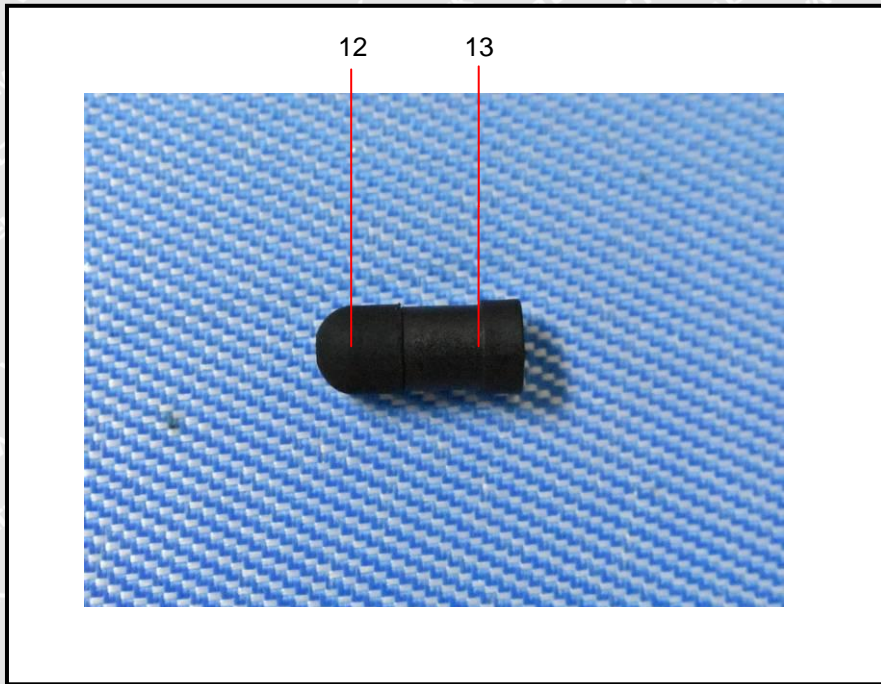


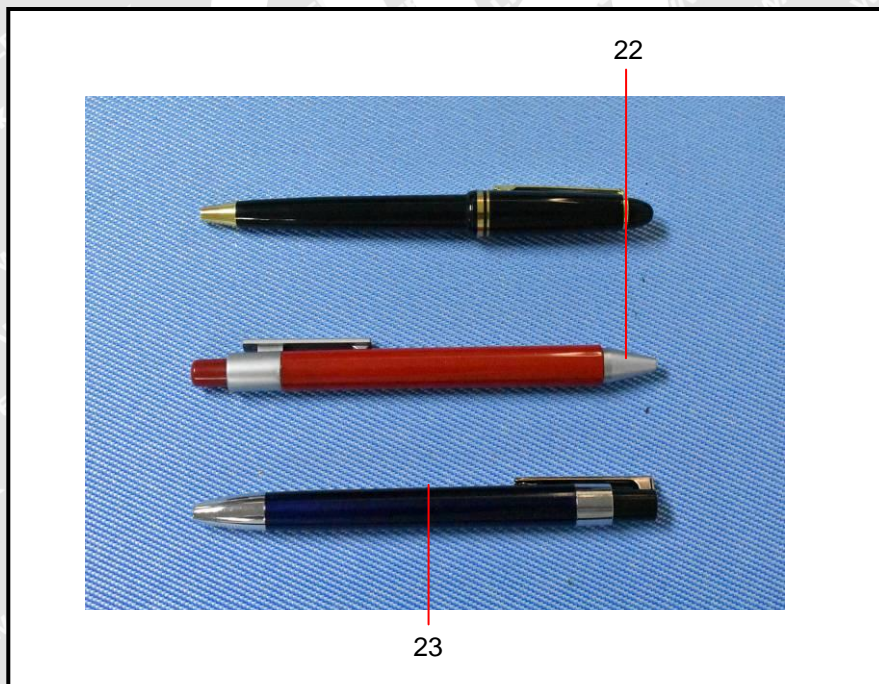
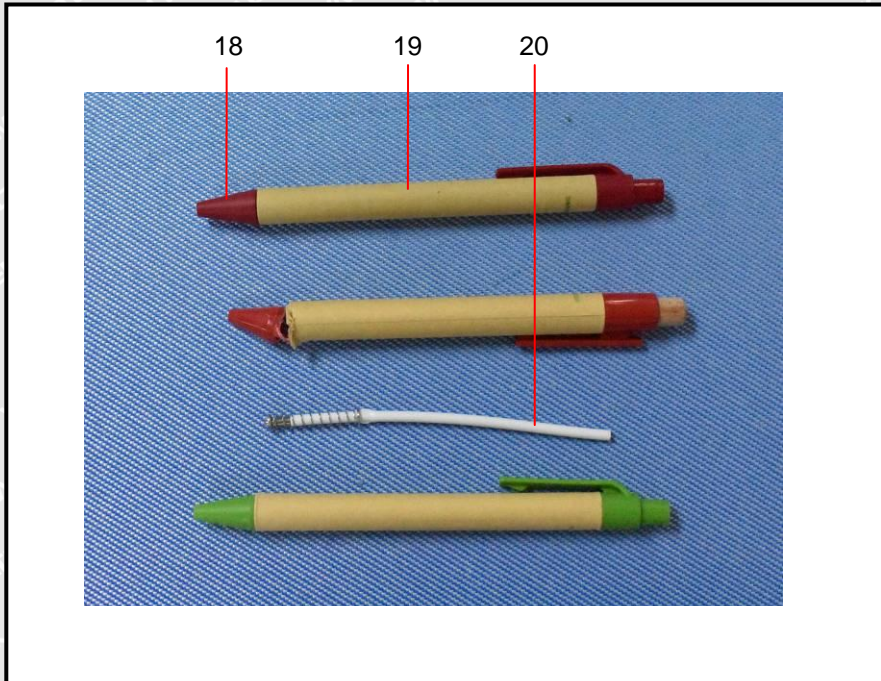
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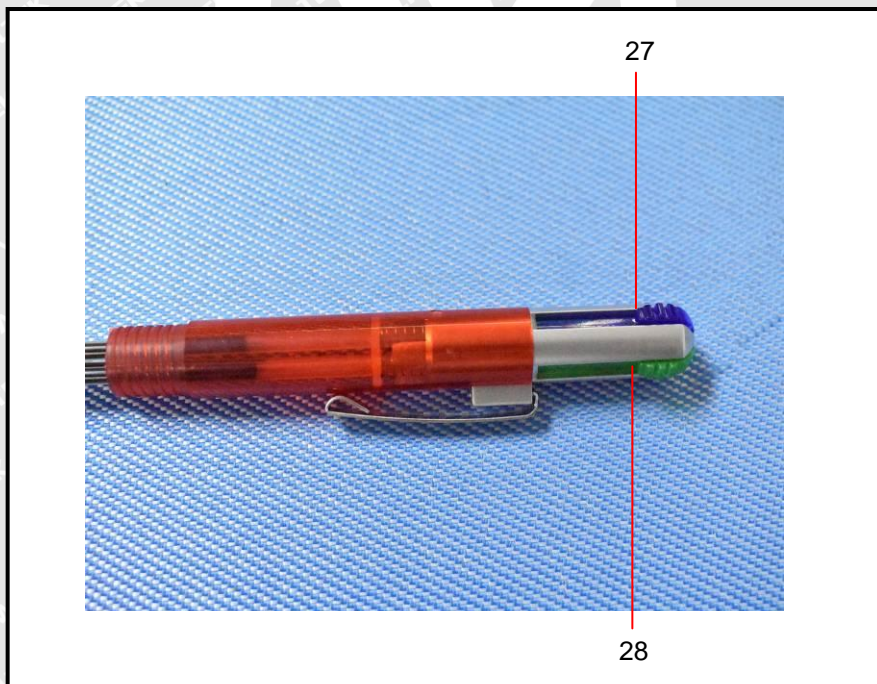
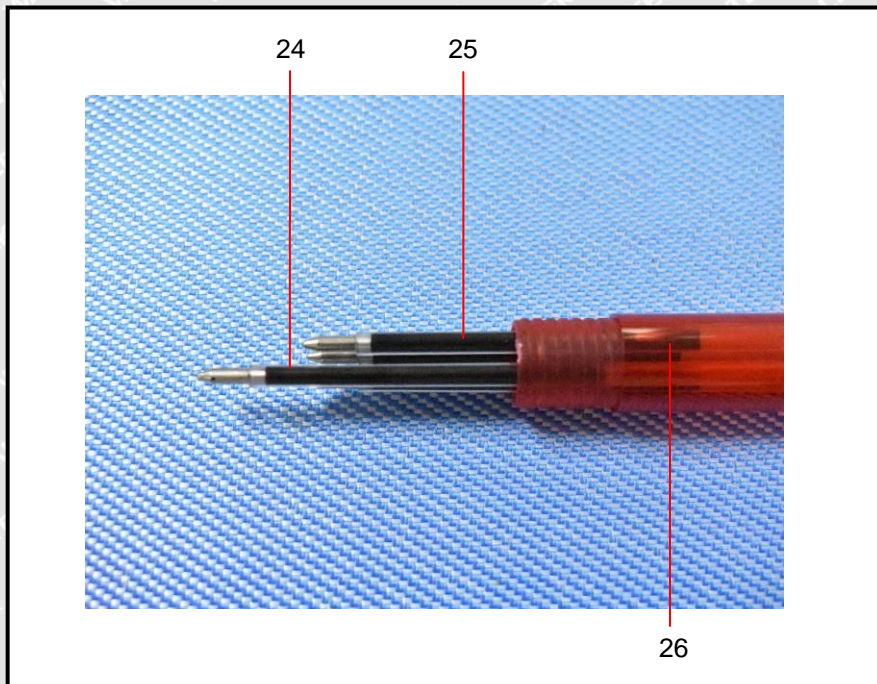


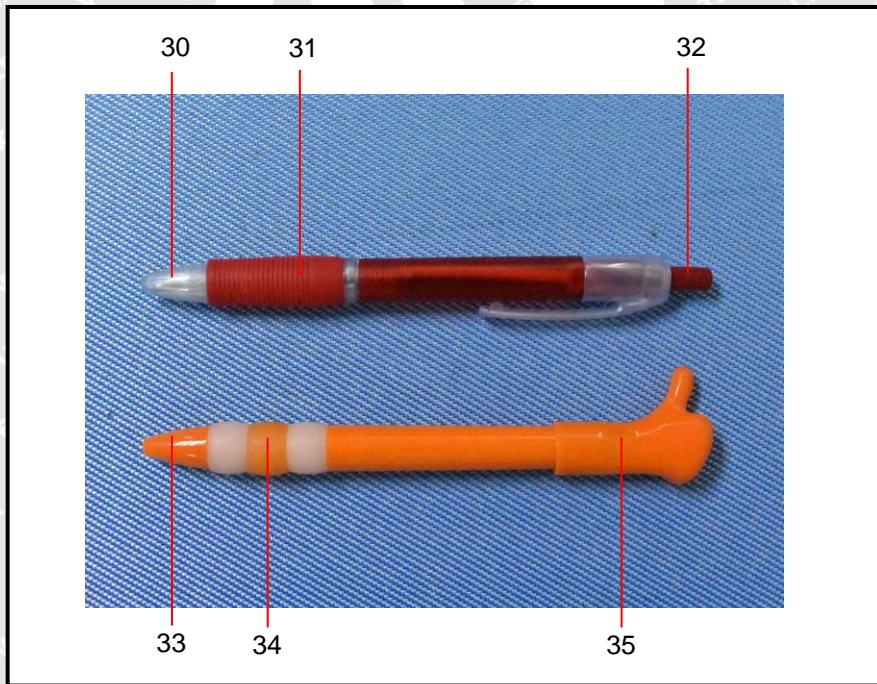
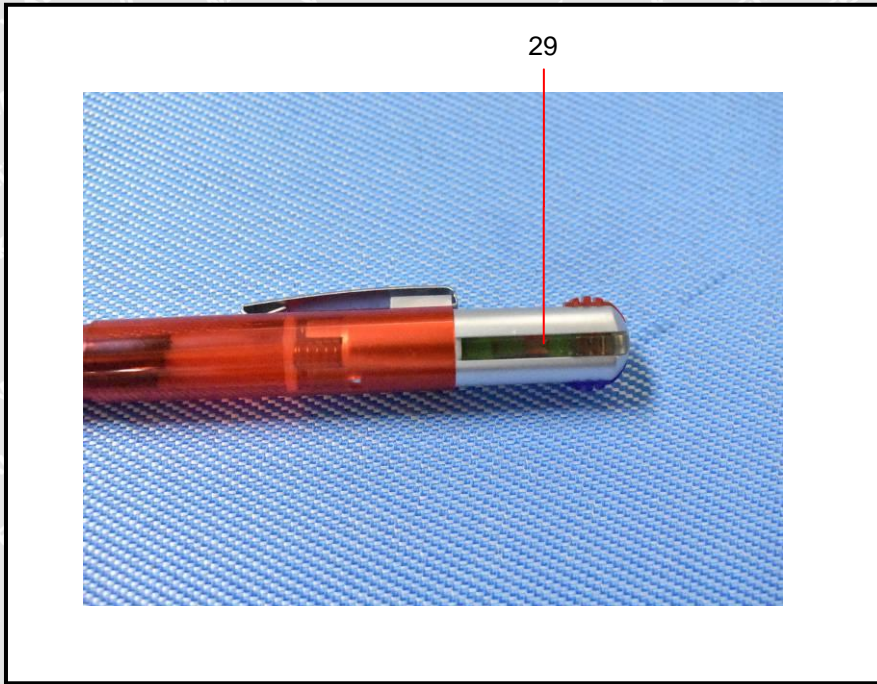
Photographs of parts tested:

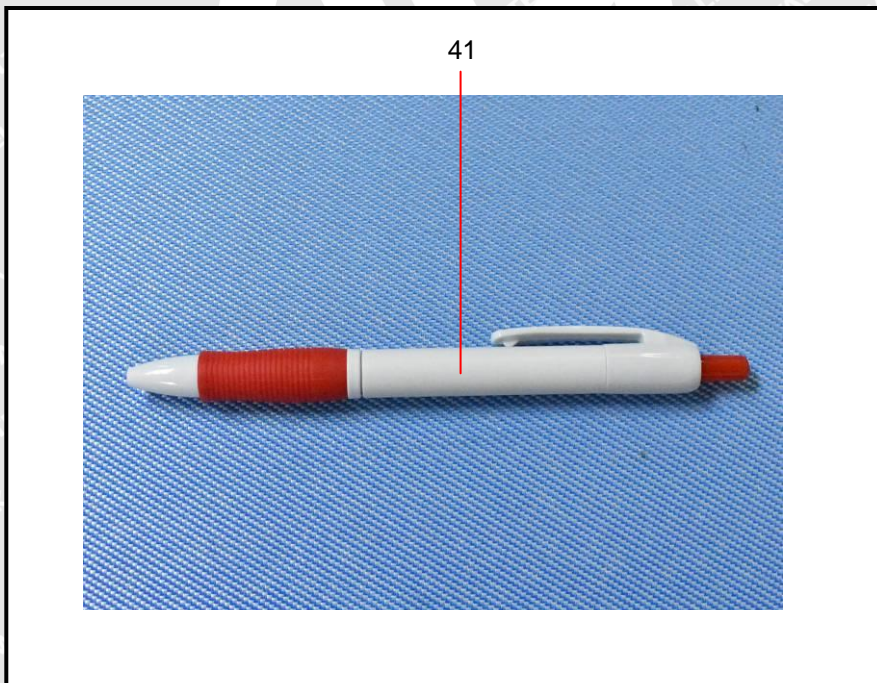
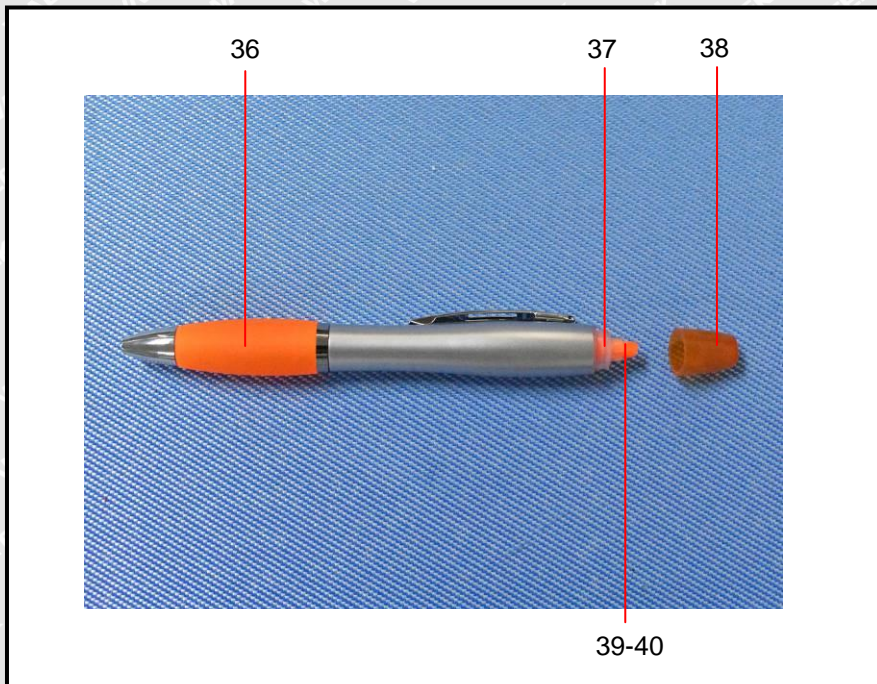


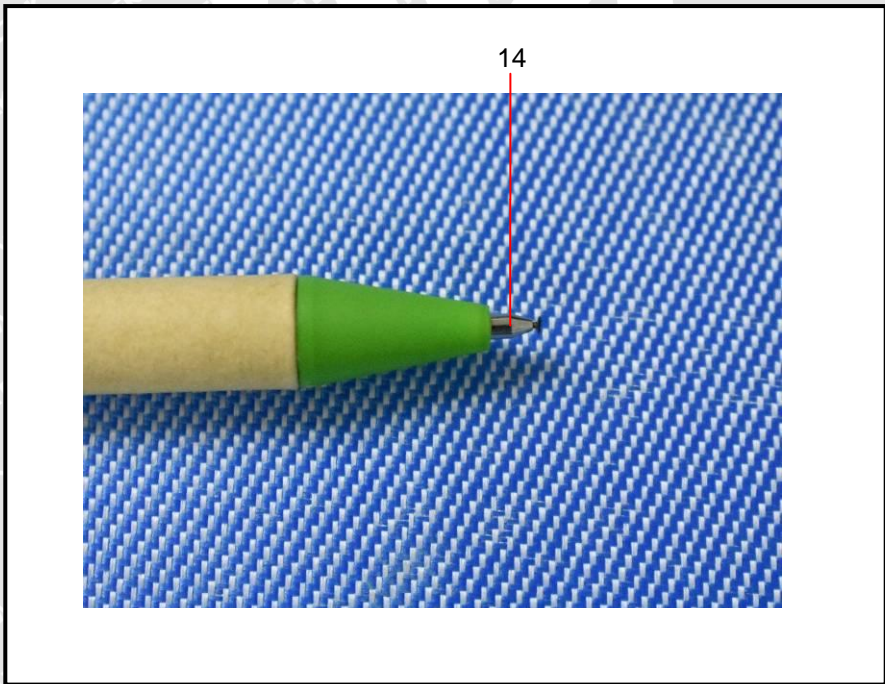
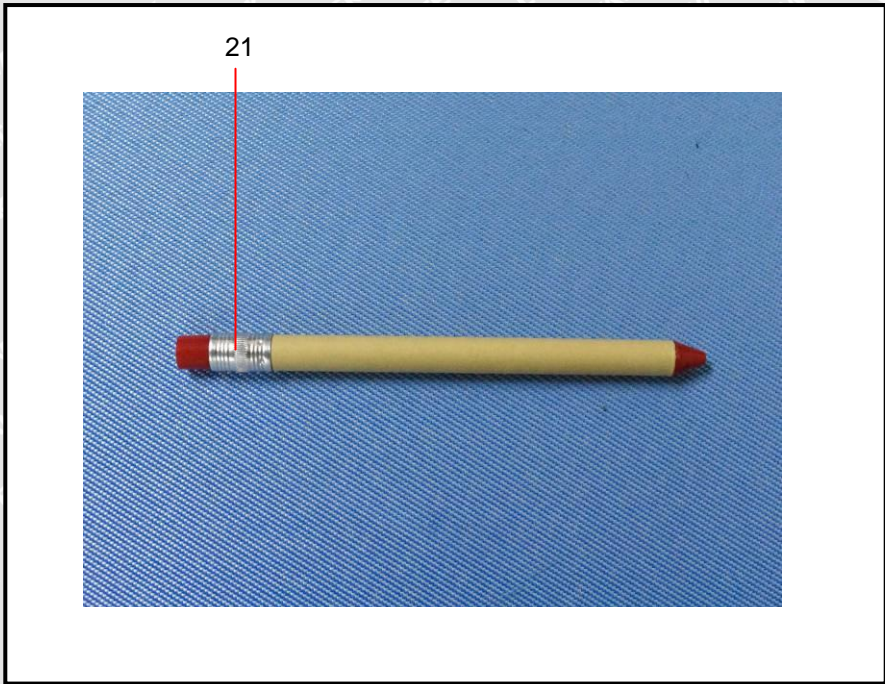












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