



Test Report No.: Q00028150a 004

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Client: On File

Test item: Toys

Identification/ Model No(s): 4D Vision Animal Anatomy models
Item No.: 26100-26115, 26700-26701, 26721-26729, 26651-26654

Sample Receiving date: 06 May 2010

Delivery condition: Apparent good, Samples tested as received

Test specification:

Test result:

Please refer to "Test Result Summary List" on page 3 for details

Please refer to page 2-18

Other Information:

Country of Origin: China

Country of Destination: Europe, USA

The provided age grade of the item(s) : Not Provided
The appropriate age grade of the item(s) : For age 3 years and up
The item(s) was/ were tested for the age of over 3 years.

Our reference no. of this report: Q00028150a 001, Q00032053, Q00038353

By customer's request, the photo(s) of submitted sample is not attached in this report.

The report Q00028150a 004 supersedes report Q00028150a 002

For and on behalf of
TÜV Rheinland (Hong Kong) Ltd.

12 Jul. 2010 Vinci Shek / Project Manager
Date Name/Position

*Test result is drawn according to the kind and extent of tests performed.
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.*



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Material list:

Material No.	Material	Color	Location
1	Whole product	multi-color	whole product
2	Coating	grey	surface of actinia spherical internal organs
3	Coating	pink	surface of actinia, dog, mouse internal organs
4	Coating	yellow	surface of actinia & actinia internal organs
5	Coating	purple / green / pink / multicolor	surface of dog & mouse internal organs
6	Coating	purple	surface of dog, mouse, actinia internal organs
7	Coating	green	surface of dog, mouse, actinia internal organs
8	Plastic	light yellow	bones & dog & mouse
9	Plastic	transparent	main body of dog, mouse & actinia
10	Plastic	white	internal organs of dog, mouse & actinia
11	Plastic	transparent blue	main body of actinia



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Test Specification	Result
EN 71 Part 1/ 10.05 + A9/ 08.09	PASS
EN 71 Part 2/ 01.06 + A1/ 03.07	PASS
EN 71 Part 3/ 12.94 + A1/09.00 + AC/07.02	PASS
Total Cadmium Content in accordance to: REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)	PASS
BBP, DBP, DEHP content and DNOP, DINP, DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 & 52 respectively (formerly known as 2005/84/EC)	PASS
ASTM F963-08: Mechanical and physical	PASS
ASTM F963-08: Flammability on solid and soft toys	PASS
ASTM F963-08 , CPSIA Sect 101 : Total lead content in paint and coating materials	PASS
CPSIA Sect 101 : Total lead content in substrate materials	PASS
ASTM F963-08: Soluble heavy metal	PASS
CPSIA Sect 108 : Phthalates	PASS
CPSIA Sect 103: Tracking label	PASS



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EN 71 Part 1: Mechanical and physical properties

Testing Period: 25 May 2010 – 26 May 2010

4.	General requirements	
4.1	Material	pass
4.7	Edges	pass
4.8	Points and metallic wires	pass
6	Packaging	pass
7	Warnings and instructions for use	
7.1	General	pass (*)
7.2	Toys not intended for children under 36 months	pass (*)

Remark:

- * Although no final packaging has been received, the manufacturer/trader/applicant has confirmed that the above information marked (*) will be shown onto the toy itself and/or packaging of the toy.



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EN 71 Part 2: Flammability

Testing Period: 25 May 2010 – 26 May 2010

4.1 General	pass
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EN 71 Part 3/ 12.94 + A1/09.00 + AC/07.02
Analysis results:

Test Method: Test portion was extracted with acid according to EN71 Part 3: 12.94 + A1/09.00 + AC/07.02 (QMA 36.035.07 HKG)

Testing Period: 26 May. 2010 – 26 May. 2010

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit of Other Toy Materials except Modelling Clay							
		60	25	1000	75	60	90	60	500
		Maximum Permissible Limit of Modelling Clay							
		60	25	250	50	25	90	25	500
		MDL							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
1 (*1) (57mg)	2	n.d.	n.d.	18.9	n.d.	22.9	n.d.	n.d.	n.d.
2 (*1) (58mg)	3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3 (*1) (41mg)	4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
4	5	2.6	n.d.	12.8	n.d.	14.0	n.d.	n.d.	n.d.
5	8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
6	9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
7	10	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
8	11	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 mg/kg denotes milligram per kilogram

*** Remark of tests of EN 71, Part 3 :**

*1. The weight of test portion marked (*1) available was less than 100mg, but greater than 10mg. The result was calculated as if 100mg of the samples were available.



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Total Cadmium Content – REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)

Test method: For plastic: EN1122: 2001 method B (QMA 36.035.24 HKG)

 For metal: sample digested with acid and determined by ICP – OES
(QMA 36.035.04 HKG)

 For other material: sample is digested with reference to EN 1122: 2001 method B
(QMA 36.035.04 HKG)

Testing period: 25 May, 2010 – 26 May, 2010

Test result

		Cadmium Content (mg/kg)		
		MDL: 10 mg/kg		
Test No.	Material No.	Trial 1	Trial 2	Average
1	2+3+4	n.d.	-	-
2	6+7	n.d.	-	-
3	8+9	n.d.	n.d.	n.d.
4	10+11	n.d.	n.d.	n.d.

 Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 mg/kg denotes milligram per kilogram


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Remark:

*1. Regulations on Cadmium

Country	Legislation	Maximum Permissible Limit		
		Paint, plastic, metal plating & other coloured materials	Metal Alloy	Gypsum
Netherlands	Netherlands Cadmium Decree 1999, No.: 149 and amendment in Sept.2000 No.186 (Chemical Substances Act)	100mg/kg	Not Specified	2mg/kg

Country	Legislation	Maximum Permissible Limit	
		Paint, plastic, plating/coating of surface treatment	Paint (high zinc content)
EC	REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)	100mg/kg	<1000mg/kg
United Kingdom	Statutory Instrument 1993 No. 1643 The Environmental Protection (Controls on Injurious Substances) (No. 2) Regulations	100mg/kg	1000mg/kg
Germany	Germany Chemikalien-Verbotsverordnung – ChemVerbotsV, Anhang Abschnitt 18, Okt 1993	100mg/kg	-
Switzerland	Switzerland Chemikalien-Risikoreduktions-Verordnung- ChemRRV, 814.81, 18 May 2005	<100mg/kg	-



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BBP, DBP, DEHP content and DNOP, DINP, DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 & 52 respectively (formerly known as 2005/84/EC)

Test method: Organic solvent extraction, analyzed by GCMS (QMA 36.035.13 HKG)

Testing period: 25 May. 2010 – 28 May. 2010

Test result

Parameter	CAS No.	Unit	Test No.	1	2
			Material No.	2+3+4	6+7
			MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.
Sum (DBP+BBP+DEHP)		%	NA	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Sum (DNOP+DIDP+DINP)		%	NA	n.d.	n.d.
Summary		%	NA	pass	pass

Parameter	CAS No.	Unit	Test No.	3	4
			Material No.	8+9	10+11
			MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.
Sum (DBP+BBP+DEHP)		%	NA	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Sum (DNOP+DIDP+DINP)		%	NA	n.d.	n.d.
Summary		%	NA	pass	pass

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 NA = Not Applicable
 % denotes percentage



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Remark:

- *1. Single components with an amount of <0.005% were not considered by the calculation of the sum.
In the case of all 6 Phthalates were not detected, the result is stated n.d.
- *2. Requirements according to BBP, DBP and DEHP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 51 (formerly known as 2005/84/EC) and DNOP, DINP and DIDP content requirements of REACH regulation (EC) No. 1907/2006 and amendment no. 552/2009 Annex XVII Item 52 (formerly known as 2005/84/EC) are summarized as below.

A. For toys and childcare articles:

Parameter	Unit	Maximum Permissible Limit
Dibutyl phthalate (DBP)	%	--
Benzylbutyl phthalate (BBP)	%	--
Diethylhexyl phthalate (DEHP)	%	--
Sum	%	0.1

B. Additional requirements for toys and childcare articles, which can be placed in mouth by the children:

Parameter	Unit	Maximum Permissible Limit
Di-n-octyl phthalate (DNOP)	%	--
Diisodecyl phthalate (DIDP)	%	--
Diisononyl phthalate (DINP)	%	--
Sum	%	0.1



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ASTM F963-08 : Mechanical and physical

Testing period: 25 May 2010 – 26 May 2010

4. Safety requirements		
4.1	Material Quality (visual check)	PASS
4.6	Small objects	PASS(*)
4.7	Accessible edges	PASS
4.9	Accessible points	PASS
4.12	Packaging film	PASS
5. Labeling requirements		
5.2	Age grading labeling	PASS(*)
5.11	Small objects, small balls, marbles and balloons	PASS(*)
7. Producer's markings		
7.1	Name and address of the producer or the distributor	PASS(*)

Remark:

- * Although no final packaging has been received, the manufacturer/trader/applicant has confirmed that the above information marked (*) will be shown onto the toy itself and/or packaging of the toy.



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ASTM F963-08 : Flammability on solids and soft toys

Testing period: 25 May 2010 – 26 May 2010

4.2 Flammability on solids and soft toys	PASS
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The burning rate of the most severe part = 0.04 Inch/sec.

Note: Maximum permissible burning rate = 0.1 Inch/sec.



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ASTM F963-08 Sect. 4.3.5.1, CPSIA Sect 101: Total lead content in paint and coating materials

Testing period: 25 May 2010 – 26 May 2010

ASTM F963-08 Sect 4.3.5.1	Total lead content in paint and coating materials	PASS
CPSIA Sect 101	Total lead content in paint and coating materials	PASS

Test method: Sample was digested with acid and the toxic elements were analysed by Inductively coupled plasma - Optical emission spectrophotometer or Atomic Absorption Spectrophotometer. (QMA 36.035.05_HKG - Hot plate method, With ref. to EPA 3050B, Microwave assisted digestion method, CPSC-CH-E1001-08 microwave method, CPSC-CH-E1002-08 and CPSC-CH-E1003-09)

Test result:

Test No.	Material No.	Lead content (ppm)
		MDL: 10 ppm
1	2+3+4	n.d.
2	6+7	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 ppm denotes parts per million

Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 101, is summarized below:

Effective Date	<u>Maximum Permissible Limit</u> Lead in paint and similar surface coating
1 year after enactment/ 14 Aug 2009	90 ppm



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CPSIA Sect 101 : Total lead content in substrate materials

Testing period: 25 May 2010 – 26 May 2010

CPSIA Sect 101	Total lead content in substrate materials	PASS
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Test method: Sample was digested with acid and the toxic elements were analysed by Inductively coupled plasma - Optical emission spectrophotometer or Atomic Absorption Spectrophotometer. (QMA 36.035.05_HKG - Hot plate method, With ref. to EPA 3050B, Microwave assisted digestion method, CPSC-CH-E1001-08 microwave method, CPSC-CH-E1002-08 and CPSC-CH-E1003-09)

Test result:

Test No.	Material No.	Lead content (ppm)
		MDL: 10 ppm
1	8+9	n.d.
2	10+11	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 ppm denotes parts per million

Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 101, is summarized below:

Effective Date	Maximum Permissible Limit Lead in accessible substrate materials
180 days after enactment/10 Feb 2009	600 ppm
1 year after enactment/14 Aug 2009	300 ppm
3 years after enactment/14 Aug 2011	100 ppm

- *2 According to Consumer Product Safety Commission, exemptions for lead as used in certain parts of children's electronic devices, for lead used :
- as an alloying element in steel, the maximum amount of lead shall be less than 0.35% by weight (3,500 ppm);
 - in the manufacture of aluminum, the maximum amount of lead shall be less than 0.4% by weight (4,000 ppm);
 - in copper-based alloys, the maximum amount of lead shall be less than 4% by weight (40,000 ppm).



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ASTM F963-08 Sect.4.3.5.2 : Soluble heavy metal

Testing period: 25 May. 2010 – 26 May. 2010

ASTM F963-08 Sect 4.3.5.2	Soluble heavy metals	PASS
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Test method: Determination of heavy metal on paint and similar surface coating material according to ASTM F963-08 (QMA 36.035.25 HKG)

This requirement applies to the coating which can be scraped off and the sample weight is greater than 10 mg

Test result:

Test No.	Material No.	[mg/kg]							
		Sb	As	Ba	Cd	Cr	Pb	Hg	Se
		Maximum Permissible Limit							
		60	25	1000	75	60	90	60	500
MDL									
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
1 (*1) (57mg)	2	n.d.	n.d.	18.9	n.d.	22.9	n.d.	n.d.	n.d.
2 (*1) (58mg)	3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3 (*1) (41mg)	4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
4	5	2.6	n.d.	12.8	n.d.	14.0	n.d.	n.d.	n.d.

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 mg/kg denotes milligram per kilogram

Remark: *1 The weight of test portion marked (*1) available was less than 100 mg, but greater than 10 mg, so results were calculated as if 100 mg of the sample were available.



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CPSIA Sect 108 : Phthalates

Testing period: 25 May 2010 – 28 May 2010

CPSIA Sect 108	Phthalates	PASS
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Test method: Organic solvent extraction, analyzed by GCMS (QMA 36.035.13 HKG)

Test result:

Parameter	CAS No.	Unit	MDL	Test No.	2
				1	2
				Material No.	6+7
				2+3+4	6+7
Parameter	CAS No.	Unit	MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass	Pass

Parameter	CAS No.	Unit	MDL	Test No.	4
				3	4
				Material No.	10+11
				8+9	10+11
Parameter	CAS No.	Unit	MDL	Result	Result
Dibutyl phthalate (DBP)	84-74-2	%	0.005	n.d.	n.d.
Benzylbutyl phthalate (BBP)	85-68-7	%	0.005	n.d.	n.d.
Diethylhexyl phthalate (DEHP)	117-81-7	%	0.005	n.d.	n.d.
Di-n-octyl phthalate (DNOP)	117-84-0	%	0.005	n.d.	n.d.
Diisononyl phthalate (DINP)	28553-12-0, 68515-48-0	%	0.005	n.d.	n.d.
Diisodecyl phthalate (DIDP)	26761-40-0, 68515-49-1	%	0.005	n.d.	n.d.
Summary- CPSIA Phthalates		NA	NA	Pass	Pass

Abbreviation: n.d. = Not Detected (< MDL)
 MDL = Method Detection Limit
 % denotes percentage



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Remark: *1 Requirement according to Consumer Product Safety Improvement Act 2008, section 108, is summarized below:

Date of Implementation	Parameter	Unit	Maximum Permissible Limit
180 days after the date of enactment/10 Feb 2009	Any children's toy or childcare article:		
	Dibutyl phthalate (DBP), Benzylbutyl phthalate (BBP) or Diethylhexyl phthalate (DEHP)	%	0.1
	Any children's toy that can be placed in a child's mouth or childcare article:		
	Di-n-octyl phthalate (DNOP), Diisodecyl phthalate (DIDP) or Diisononyl phthalate (DINP)	%	0.1



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CPSIA Sect 103 : Tracking label

Testing period: 25 May 2010 – 26 May 2010

Tracking Label	PASS(*)
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Remark: * Although no final packaging has been received, the manufacturer/trader/applicant has confirmed that the above information marked (*) will be shown onto the packaging or instruction sheet and the toy itself.

This test is not covered by DAP accreditation

Testing Laboratory accredited by DAP according to DIN EN ISO/IEC 17025. The accreditation is valid for the test methods stated in the certificate.

- END -

