

Technical Report No.60.160.13.6043.01A(R1)

Dated 2013-10-16



Applicant: Baby Solutions SA
Via Magazzini Generali 10

Test Subject: EAT WELL! 1st Step Weaning Set
Style No.: 40001.10

Purpose(s) of Examination(s)	Result(s) Summary
For Plastic	
Test for compliance with Regulation (EU) No. 10/2011	
1. Overall Migration	PASS
2. Specific Migration of Heavy Metals - Ba, Co, Cu, Fe, Li, Mn, Zn	PASS
3. Specific Migration of Primary Aromatic Amines	PASS
4. N-Nitrosamines and N-Nitrosable substances	PASS
Test with reference to Resolution AP2004(4)	
Test according to EN 12868:1999 then followed by GC/NPD	
5. N-Nitrosamines and N-Nitrosable substances	PASS
Directive 2009/48/EC and its amendments	
Test with reference EN 71-12:2012 by LC/MS/MS and GC/ NPD	
Test in accordance with EN 14372:2004 (Child use and Care Articles – Cutlery and feeding utensils – Safety requirements and tests) and EN 14350-2:2004 (Child use and Care Articles –Drinking Equipment)	
6. EN 14372:2004 Clause 5.2 -5.3 – Mechanical and Physical Properties	PASS
7. EN 14372:2004 Clause 5.4.2.2 – Migration of Certain Elements	PASS
8. EN 14372:2004 Clause 5.4.2.3 – Total Phthalate Content	PASS
EN 14350-2:2004 Clause 4.4 - Migration of Certain Elements	PASS
Test in accordance with EN 14350-1:2004	
Child use and care articles – Drinking equipment	
9. General and mechanical requirements and tests	PASS

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Test result:	Refer to Section 3
Conclusion(s):	1-3) The submitted sample(s) were tested with the selected requirements with the stated regulation(s) and concluded that Regulation (EU) No. 10/2011 with its amendments Regulation (EC) No. 1935/2004, Article 3 (1a,b) 4. N-Nitrosamines and N-Nitrosable substances Test with reference to Resolution AP2004(4) Test according to EN 12868:1999 then followed by GC/NPD 5. N-Nitrosamines and N-Nitrosable substances Directive 2009/48/EC and its amendments Test with reference EN 71-12:2012 by LC/MS/MS and GC/ NPD EN 14372:2004 (Child use and Care Articles – Cutlery and feeding utensils – Safety requirements and tests) and EN 14350-2:2004 (Child use and Care Articles –Drinking Equipment) 6. EN 14372:2004 Clause 5.2 -5.3 – Mechanical and Physical Properties 7. EN 14372:2004 Clause 5.4.2.2 – Migration of Certain Elements and EN 14350-2:2004 Clause 4.4 - Migration of Certain Elements 8. EN 14372:2004 Clause 5.4.2.3 – Total Phthalate Content Test in accordance with EN 14350-1:2004 Child use and care articles – Drinking equipment 9. General and mechanical requirements and tests
	Comply Comply PASS PASS PASS PASS PASS PASS PASS PASS
Remark(s):	- The result relates only to the items tested - Sample(s) are tested as received - This report supersedes technical report no. 60.160.13.6043.01A issued on 2013-10-09

No extract, abridgment or abstraction from a test report may be published or used to advertise a product without the written consent of the Director of TÜV SÜD Hong Kong Ltd. The results contained herein apply only to the particular sample tested and to the specific test carried out and not to samples of the current production line.

1 Order

1.1 Customer's Reference

Style No.: 40001.10

1.2 Receipt Date of Test Sample, Location

Received on 2013-08-19, Hong Kong

1.3 Date of Testing, Location

From 2013-08-20 to 2013-08-29, Hong Kong

1.4 Document Submitted

Nil

2 Description of the Test Subject

Sample	Color and Description	Photograph
001	Green PP plastic with multi colour printing (Fork, spoon, mug, bowl, plate)	
002	Red TPE plastic (No-slip ring of mug, bowl, plate)	
003	Green PP plastic (Fork, spoon, mug, bowl, plate)	
004	Multi colour coating on plastic (Fork, spoon, mug, bowl, plate)	



3 Test Results

3.1 Overall Migration Test

- As specified in Regulation (EU) No. 10/2011 ANNEX III and V then test with reference to EN 1186-9:2002 (Article Filling method) and EN 1186-14:2002 (Substitute test method)

Simulant(s) Used	Test Condition(s)	Result(s) [mg/dm ²]	Maximum Permissible Limit [mg/dm ²]
		001	
3% Acetic acid	70 °C for 2 Hours	<3	10
95% Ethanol	60 °C for 2 Hours	<3	
Isooctane	40 °C for 0.5 Hour	<3	

- Note:
1. mg/dm² denotes milligram per square decimeter
 2. °C denotes degree Celsius
 3. < denotes less than
 4. Limit is quoted from Regulation (EU) No. 10/2011

3.2 Specific Migration of Heavy Metals - Ba, Co, Cu, Fe, Li, Mn, Zn

- As specified in Regulation (EU) No. 10/2011 ANNEX III and V, sample(s) were tested with 70 °C for 2 Hours in 3% Acetic acid and followed by ICP-OES

Test	Results [mg/kg]	Maximum Permissible Limit [mg/kg]
	001	
Barium (Ba)	<0.1	1
Cobalt (Co)	<0.05	0.05
Copper (Cu)	<0.50	5
Iron (Fe)	<1.0	48
Lithium (Li)	<0.10	0.6
Manganese (Mn)	<0.05	0.6
Zinc (Zn)	<1.0	25

- Note:
1. mg/kg denotes milligram per kilogram foodstuff
 2. °C denotes degree Celsius
 3. < denotes less than
 4. Limit is quoted from Regulation (EU) No. 10/2011

3.3 Specific Migration of Primary Aromatic Amine

- As specified in Regulation (EU) No. 10/2011 ANNEX III and V, sample(s) were tested with reference to Kunststoffe im Lebensmittelverkehr, Book 2, Teil B II, Part XXI

Testing Condition and simulant: 70 °C for 2 Hours in 3% Acetic acid

Test	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
	001	
Primary Aromatic Amine	<0.01	0.01

- Note:
1. mg/kg denotes milligram per kilogram foodstuff
 2. °C denotes degree Celsius
 3. < denotes less than
 4. Limit is quoted from Regulation (EU) No. 10/2011
 5. Result(s) are expressed as sum of aniline

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3.4 N-Nitrosamines and N-Nitrosable substances (Resolution AP 2004(4))

- Test according to EN 12868:1999 then followed by GC/NPD

Test Item(s)	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
	Sample 002	
#2 Migration of N-Nitrosamines	<0.01	0.01
#2 Migration of N-Nitrosable substances	<0.1	0.1
#1 Conclusion	PASS	--

Remarks:

#1. Conclusion drawn is only based on sum of the listed compounds as shown in below table.

#2. Tested N-nitrosamines and N-nitrosable substances are listed below:

	Compounds name	Abbreviation	CAS#
1	N-Nitrosodimethylamine	NDMA	62-75-9
2	N-nitrosodiethylamine	NDEA	55-18-5
3/4	N-nitrosopyrrolidine or N-nitroso N-methyl N-phenylamine	NPYR or NMPPhA	930-55-2 or 614-00-6
5	N-nitrosomorpholine	NMOR	59-89-2
6	N-Nitrosodi-n-propylamine	NDPA	621-64-7
7	N-nitrosopiperidine	NPIP	100-75-4
8	N-nitroso N-ethyl N-phenylamine	NEPhA	612-64-6
9	N-Nitrosodi-n-butylamine	NDBA	924-16-3
10	N-nitrosodibenzylamine	NDBzA	5336-53-8
11	N-Nitroso-N,N-di-(7-methyloctyl)amine	NDiNA	643014-99-7

Note: 1. mg/kg denotes milligram per kilogram

2. < denotes less than

Requirement(s)	Scope	Limit(s)
EU (EN 14350-2 : 2004, Clause 5.3)	(Rubber, Silicone, TPEs) Children Drinking Equipments including feeding bottles	Migration of N-nitrosamines Total : 0.01 mg/kg
		Migration of N-nitrosable substances Total : 0.1 mg/kg



3.5 N-Nitrosamines and N-Nitrosable substances

Directive 2009/48/EC and its amendments

Test with reference EN 71-12:2012 by LC/MS/MS and GC/ NPD

Test	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
	Sample 002	
#2 Migration of N-Nitrosamines	<0.025	0.05
#2 Migration of N-Nitrosatable substances	<0.1	1
#1 Conclusion	PASS	--

Remarks:

#1. Conclusion drawn is only based on sum of the listed compounds as shown in below table.

#2. Tested N-nitrosamines and N-nitrosatable substances are listed below:

	Compounds name	Abbreviation	CAS#
1	N-Nitrosodimethylamine	NDMA	62-75-9
2	N-nitrosodiethylamine	NDEA	55-18-5
3	N-Nitrosodiisopropylamine	NDiPA	601-77-4
4	N-nitroso-N-methyl N-phenylamine	NMPhA	614-00-6
5	N-nitrosomorpholine	NMOR	59-89-2
6	N-Nitrosodi-n-propylamine	NDPA	621-64-7
7	N-nitrosopiperidine	NPIP	100-75-4
8	N-nitroso-N-ethyl N-phenylamine	NEPhA	612-64-6
9	N-Nitrosodiisobutylamine	NDiBA	997-95-5
10	N-Nitrosodi-n-butylamine	NDBA	924-16-3
11	N-nitrosodibenzylamine	NDBzA	5336-53-8
12	N-Nitrosodiisononylamine	NDiNA	1207995-62-7
13	N-Nitrosodiethanolamine	NDELA	1116-54-7

Note: 1. mg/kg denotes milligram per kilogram by weight
2. < denotes less than



3.6 Mechanical and Physical Properties

Test in accordance with EN 14372:2004. Child use and care articles – Cutlery and feeding utensils – Safety requirement and tests

Clause	Description	Result*
5.2	General requirements	--
5.2.1	Visual and tactile examination	C
5.2.2	Sharp points	C
5.2.3	Sharp edges	C
5.2.4	Small parts	C
5.2.5	Holes (Finger traps)	C
5.2.6	Printed decorations	C
5.3	Mechanical requirements	--
5.3.1	Tensile strength	C
5.3.2	Torque test	C
5.3.3	Tear resistance	NA
5.3.4	Strength/ rigidity	C
5.3.5	Drop test	C
7	Product information	--
7.1	General	C
7.2	Purchase information	C
7.3	Instruction for use	C
7.4	Warnings	C

* Abbreviation : C = Complied, NC = Not Complied, NA = Not Applicant

3.7 Migration of Certain Elements

Sample preparation in according with EN 14372:2004 Clause 5.4.2.2 and EN 14350-2:2004 Clause 5.2 (as specified in BS EN 71-3 : 1994 with amendment A1:2000/AC:2002), followed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES)

Elements	Result [mg/kg]			Maximally Permissible Limits [mg/kg]
	Sample 002	Sample 003	Sample 004	
Soluble Antimony	<5.0	<5.0	<5.0	15
Soluble Arsenic	<2.5	<2.5	<2.5	10
Soluble Barium	<5.0	<5.0	13.9	100
Soluble Cadmium	<5.0	<5.0	<5.0	20
Soluble Chromium	<5.0	<5.0	<5.0	10
Soluble Lead	<5.0	<5.0	<5.0	25
Soluble Mercury	<5.0	<5.0	<5.0	10
Soluble Selenium	<5.0	<5.0	<5.0	100

Note: 1. mg/kg denotes milligram per kilogram
2. < denotes less than



3.8 Total Phthalate Content

Test with reference to EN 14372:2004 Clause 6.3.2 by Gas Chromatography Mass Spectroscopy

Phthalates	Result [% by weight]		
	Sample 002	Sample 003	Sample 004
Bis (2-ethylhexyl) phthalate, DEHP	< 0.005	0.008	< 0.005
Dibutyl phthalate, DBP	< 0.005	< 0.005	< 0.005
Benzyl butyl phthalate, BBP	< 0.005	< 0.005	< 0.005
Di-isononyl phthalate, DINP	< 0.005	< 0.005	< 0.005
Di-isodecyl phthalate, DIDP	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate, DNOP	< 0.005	< 0.005	< 0.005
Sum of DEHP, DBP, BBP, DINP, DIDP & DNOP	<0.005	0.008	<0.005
Conclusion:	Pass	Pass	Pass
Maximum Permissible limit – SUM of DEHP, DBP, BBP, DINP, DIDP, DNOP	Not Exceed 0.1% by weight		

Note: 1. < denotes less than





3.9 Test in accordance with EN 14350-1:2004 Child use and care articles – Drinking equipment
 – General and mechanical requirements and tests

<u>Clause</u>	<u>Description</u>	<u>Result*</u>
5.1	General	C
5.2	Visual and tactile examination	C
5.3	Small parts	C
5.4	Volume	--
5.4.1	Volumetric labelling	NA
5.4.2	Volumetric accuracy	NA
5.5	Resistance to tearing	C
5.6	Additional requirements for re-usable products	--
5.6.1	Resistance to boiling water	C
5.6.2	Print adhesion of markings and decorations	C
5.6.3	Thermal shock	C
5.7	Additional requirements for sealing discs	NA
5.8	Requirements for matched components	--
5.8.1	Includes protrusions	NA
5.8.2	Includes straws	NA
5.9	Requirements for protrusions	NA
5.10	Requirements for straws	NA
7	Consumer packaging	C
8	Product information	--
8.1	General	C
8.2	Purchase information	C
8.3	Instructions for use	C

* Abbreviation : C = Complied, NR = Not Applicant

TÜV SÜD Hong Kong Ltd
 TÜV SÜD Group

Tested by:



Ricky Cheung
 Project Manager
 Chemical Department

Reviewed by:

Bingo Leung
 Technical Manager
 Chemical Department

- End of Report -

General Terms and Conditions of TÜV SÜD Hong Kong Limited (hereinafter referred to as *the company*)

1. General Information and Definitions

- (1.1) In the event that an order for any services is placed, the Client shall accept the General Terms and Conditions. The General Terms and Conditions shall be applicable to all orders, resulting contracts and other arrangements, including all offers made or services provided by the Company or any of its affiliated companies. They are not applicable if and as far as they are in conflict with the regulations on services performed on behalf of governments, government bodies or any other public entity, or they are in conflict with mandatory provisions of local law. The Client's placement of orders as well as the conclusion of contracts with the Company shall be regarded as awareness and acceptance of these General Terms and Conditions.
- (1.2) The Company strongly recommends any Client or potential Client to read the full text of these General Terms and Conditions prior to placement of any order or conclusion of any contract with the Company. Ancillary agreements, promises and other statements made on the part of the Company staff or the experts called upon by them shall be binding only if they are expressly confirmed by the Company in writing. This shall also apply to any modifications of this clause.

2. Provision of Services

- (2.1) With due care and skill, the Company will provide services according to Client's specific instructions as made available by the Client. In the absence of Client's specific instructions, the following is deemed as instructions given to the Company:
- (a) The terms of any standard specification sheet or standard order form provided by the Company; and/or
- (b) Any relevant usage, practice or trade custom; and/or
- (c) Such methods the Company considers technically, operationally and/or on financial grounds appropriate.
- (2.2) No other party is entitled to give any instructions particularly on the scope and type of the services or the reports delivered, or on the resulting certificates (the "Reports of Findings"), unless the Company receives prior written instructions to the contrary from the Client. The Client hereby irrevocably authorizes the Company to deliver Reports of Findings to a third party where so instructed by the Client or, at the Company's discretion, where it implicitly follows from circumstances, trade custom, usage or practice.
- (2.3) The Information stated in the Report of Findings is derived from the results of inspection or testing procedures carried out in accordance with the instructions and/or Company's assessment of such results on the basis of any technical standards, trade custom or practice, or other circumstances which should in Company's professional experience be taken into account.
- (2.4) Reports of Findings issued after the testing of samples refer the Company's opinion only on samples under testing and not to the lot from which the samples were drawn.
- (2.5) Client agrees that the Company's sole responsibility is to be present at the time of the third party's intervention and to forward the results, or confirm the occurrence of the intervention, in case Client requests the Company to witness any third party's intervention. Client agrees that the Company will use the test methods for analysis as requested in the request form, and if none is stated in the form, the Company will choose the appropriate test methods for analysis.
- (2.6) The Reports of Findings issued by the Company will reflect the facts as recorded by it at the time of its intervention only and within the limits of the instructions received or, in the absence of such instructions, within the limits of the alternative parameters applied as provided for in Clause 2.1. The Company is under no obligation to refer to, or report upon, any facts or circumstances, which are outside the specific instructions received or alternative parameters applied.
- (2.7) The performance of all or part of the services may be delegated to an agent or subcontractor by the Company. The Client authorizes the Company to disclose all information necessary for such performance to the agent or subcontractor.
- (2.8) Documents reflecting engagements contracted between the Client and third parties or third party documents, e.g. sales contract copies, letters of credit, bills of lading, etc. should be made available to the Company. These are considered to be for information only, and do not extend or restrict the scope of the services or the obligations accepted by the Company.
- (2.9) The Company agrees that, by providing the services to the Client, it neither takes the place of Client or any third party, nor otherwise assumes, abridges, abrogates or undertakes to discharge any duty of the Client to any third party or that of any third party to the Client. Also, it does not release the Client or any third party from any of their obligations.
- (2.10) Depending on the nature of each sample, all samples given to the Company shall be retained for a maximum of 3 months or for such other shorter time period as the nature of the sample permits, and then sent back to Client or otherwise disposed of at the Company's discretion. After that time the Company will not be responsible for the samples. Storage of samples for more than 3 months shall incur a storage fee payable by the Client. If samples are returned to the Client, the Client will be billed a handling and freight fees. Special disposal charges will be billed to the Client if incurred.

3. Client's Obligations

The Client shall:

- (3.1) ensure that all required supporting documents, information and instructions as submitted are accurate, truthful and complete. These information are to be submitted in a timely not later than 2 working days from the date of which the services are requested by the Client
- (3.2) ensure to give all necessary access for the Company's representatives to the premises where the services are to be performed and to take all necessary steps to eliminate or remedy any obstacles to, or interruptions in the performance of the services;
- (3.3) make available any special equipment and personnel necessary for the performance of the services, if required;
- (3.4) ensure that for the safety and security of working conditions, sites and installations, all necessary measures are taken during the performance of services. In this respect, the Client will not rely on the Company's advice whether required or not;
- (3.5) inform the Company of any known hazards or dangers, actual or potential, associated with any order, samples, testing or any other service rendered by the Company well in advance. Those are, but are not limited to the presence or risk of radiation, environmental pollution or poisons-toxic or noxious or explosive elements or materials;
- (3.6) fully exercise all its rights and discharge all its liabilities under any relevant sales or other contract with a third party.

4. Fees and Payment

- (4.1) All Fees not agreed on between the Company and Client at the time the order is placed or a contract is concluded shall be determined by the Company's Schedule of Fees (which are subject to change). All applicable taxes shall be paid by Client, as far as mandatory laws do not provide otherwise.
- (4.2) Unless a specific period is established in the invoice, the Client shall pay upon receiving the invoice, but not later than 30 days from the relevant invoice date or within such other period as may be established by the Company in the invoice (the "Due Date").
- (4.3) The Client shall not be entitled to retain or defer due payment of any sums to the Company on account of any dispute, counter claim or set-off against the Company. The Company reserves the right to retain or defer any due payments if any dispute arises with or it raises any counterclaim against the Client. The Company is entitled to set off due payments against payments of the

Client.

- (4.4) For the collection of unpaid fees, the Company may decide to bring action in any court with competent jurisdiction. The corresponding collection costs, including attorney's fees and related costs, shall be borne by the Client, as far as the mandatory local law does not provide otherwise.
- (4.5) In case of any unforeseen problems or expenses arise while carrying out the services, the Company informs the Client. In such cases, the Company shall be entitled to charge additional fees to cover extra time and to invoice extra costs necessarily incurred to complete the services.
- (4.6) If the Company is unable to perform all or parts of the services for any cause whatsoever beyond the Company's control, including the failure by Client to comply with any of its obligations provided for in the foregoing Clause 3, the Company shall nevertheless be entitled to payments of:
- (1) The amount of all non-refundable expenses incurred by the Company; and
- (2) A proportion of the agreed fee equal to the proportion of the services actually carried out.

5. Suspension or Termination of Services

In any case mentioned below, the Company shall be entitled to either suspend or terminate the provision of the services immediately and without any liability:

- (5.1) Failure by the Client to comply with any of its obligations under these General Terms and Conditions and such failure is not remedied within 10 days after a notice of such failure has been delivered to the Client; or
- (5.2) Any suspension of payment, arrangement with creditors, bankruptcy, insolvency, receivership or cessation of business by Client.

6. Liability and Indemnification

(6.1) Limitation of Liability:

- (1) Clients seeking a guarantee against loss or damage should obtain appropriate insurance. The Company is neither an insurer nor a guarantor and disclaims all liability in such capacity.
- (2) Reports of Findings are issued on the basis of the information, documents and/or samples provided by, or on behalf of the Client and solely for the benefit of the Client who is obliged to act on the basis of such Reports of Findings. Neither the Company nor any of its staff, agents or subcontractors shall be liable to the Client nor to any third party for any actions taken or not taken on the basis of such Reports of Findings, or for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to the Company.
- (3) For any delayed, total or partial non-performance of the services arising directly or indirectly from any event beyond the Company's control, including failure by Client to comply with any of its obligations hereunder, the Company shall not be liable.
- (4) The liability of the Company in respect of any claim for loss, damage or expense of any nature and howsoever arising shall in no circumstances exceed a total aggregate sum equal to 10 times the amount of the fee paid in respect of the specific service which gives rise to such claim, and shall in any case not exceed the equivalent of 25,000 EUR in HKD.
- (5) For any indirect or consequential loss (including loss of profits), the Company shall not have any liabilities.
- (6) In case of any claim, the Client must give written notice to the Company within 30 days of discovery of the facts with all necessary documents to justify such claim. In any case, the Company shall be discharged from all liability for all claims for loss, damage or expense unless a lawsuit is brought within two years from:
- (i) the performance date of the Company for its services which refers to the claim; or
- (ii) the date when the service should have been completed in the event of any alleged non-performance.

- (6.2) Indemnification: Against all claims (actual or threatened) by any third party for loss, damage or expenses of whatsoever nature including all legal expenses and related costs and howsoever arising relating to the performance, purported performance or non-performance of any services, the Client shall guarantee, hold harmless and indemnify the Company and its officers, employees, agents or subcontractors.

7. Obligation of Confidentiality, Copyright, Data Privacy Protection

- (7.1) The Company shall be authorized to make file copies of written documents, which have been made available to it for review and which are important for processing the order.
- (7.2) Insofar as Reports of Findings are prepared in the course of processing the order and which are subject to the protection of copyright, then the Company shall grant the Client a simple, non-transferable right to use, insofar as this is necessary and in accordance with the contractually presupposed purpose. Other rights shall not be transferred; in particular, the customer shall not be entitled to modify and/or edit audit reports or to make use of such outside of his business premises.
- (7.3) The Company and its staff which may be called in shall not disclose or use trade and business matters about which they have gained knowledge during the performance of their work without proper authorization.

8. Miscellaneous

- (8.1) The validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired, even if any one or more provisions of these General Conditions are found to be illegal or unenforceable in any respect.
- (8.2) Client shall not directly or indirectly entice, encourage or make any offer to Company's employees to leave their employment with the Company, during the course of providing the services and for a period of one year thereafter.
- (8.3) Use of the Company's corporate name or registered marks for advertising purposes is not permitted without the Company's prior written authorization.

9. Governing Law, Jurisdiction and Dispute Settlement

- (9.1) Unless specifically agreed otherwise, all disputes arising out or in connection with contractual relationship(s) hereunder shall be governed by the applicable laws and regulations of the Hong Kong S.A.R Region.
- (9.2) Place of performance for any obligation arising out of this contract shall be Hong Kong, the Place of TÜV SÜD Hong Kong Limited, unless otherwise expressly agreed by the parties.

10. Languages

In the event of any discrepancy between the English and the Chinese version of these General Terms and Conditions, the English version shall prevail.