



SATRA Technology Centre Ltd
Wyndham Way, Telford Way, Kettering,
Northamptonshire, NN16 8SD United Kingdom
Tel: +44 (0) 1536 410000
Fax +44 (0) 1536 410626
email: info@satra.co.uk
www.satra.co.uk

Customer details: AMPri Handelsgesellschaft mbH
Rolf- Uhrmacher-Allee 1a
21435 Stelle
Germany

SATRA reference: CHM0237211/1532/EN

Your reference:

Date of report: 3rd August 2015

Samples received: 27th April 2015

TECHNICAL REPORT

Subject:

Overall migration limit and extractable metals testing on gloves described as 01068 (Black Ninja) against 3% acetic acid, 10% ethanol and vegetable oil in accordance with BS EN 1186: 2002 and Commission Regulation No. 10/2011.

Conditions of Issue:

This report may be forwarded to other parties provided that it is not changed in any way. It must not be published, for example by including it in advertisements, without the prior, written permission of SATRA.

Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in the report.

Please note uncertainty of measurement has not been applied to the results in this report. SATRA uncertainty of measurement values are available on request.

Report signed by: Emma Norris
Position: Chemical Technologist
Department: Chemical & Analytical Technology

(Page 1 of 7)

WORK REQUESTED:

Samples of gloves described as 01068 (Black Ninja) were received on the 27th April 2015 for assessment in accordance with the overall migration limit requirements of Commission Regulation No. 10/2011.

We were requested to assess the gloves as repeat use items, therefore the extractions were carried out three times on each specimen, with the 3rd result compared to the overall migration limit.

The overall migration limit testing against vegetable oil was carried out by an external laboratory, and reported under their reference AC/REP/136008/30.

Gloves were originally received and reported under SATRA reference CHM0234328/1518/DRWM issued on the 2nd July 2015.

CONCLUSIONS:

When tested in accordance with BS EN 1186-7: 2002 for repeat use items, the gloves described as 01068 (Black Ninja) were found to meet with the overall migration limit requirements when assessed against 10% Ethanol, 3% acetic acid and vegetable oil for 5 minutes at 40 °C.

The specific migration limits for metals were assessed after extraction in 3% Acetic acid, for 5 minutes at 40°C and were found to meet with the requirements in Commission Regulation (EU) No 10/2011, Annex II.

Results are given in the following tables.

TESTING REQUIRED:

- BS EN 1186 part 7: 2002 Materials and articles in contact with foodstuffs – Plastics Test methods for overall migration into aqueous food simulants using a pouch for 5 minutes at 40°C.
 - 10% Ethanol (simulant A Commission Regulation No. 10/2011)
 - 3% Acetic Acid (simulant B in Commission Regulation No. 10/2011)
- TES-AC-500; Based on BS EN 1186 part 8: 2002 Materials and articles in contact with foodstuffs – Plastics Test methods for overall migration into olive oil for 5 minutes at 40°C. (Performed by an external laboratory)
 - Vegetable oil* (simulant D2 in Commission Regulation No. 10/2011)
- †Extractable metals analysis (Ba, Co, Cu, Fe, Li, Mn, Zn) on food simulant extracts by ICP-OES

*Note: Sunflower oil was used as an alternative to rectified olive oil – “reference simulant D”. The sunflower oil used has characteristics in accordance with those specified in Annex A of BS EN 1186-1: 2002.

Testing was carried out assuming repeat use articles, three were carried out for each test specimen, and only the third result is reported

RESULTS AND REQUIREMENTS:

Migration into aqueous food simulants using a pouch

Pouch Method

The gloves were assessed by reversing the gloves to form a pouch and filling with each simulant. The surface area of each glove was calculated by determining the density of the glove, weighing the part of the glove that was in contact with the simulant and calculating the area assuming a homogeneous material.

Sample	Test Method	Global migration (mg/dm ²)		Mean Global migration (mg/dm ²)	Pass/Fail
		A	B		
01068 (Black Ninja)	BS EN 1186-7 (3% Acetic acid)	A	<1	1.2	Pass
		B	2.1		
		C	1.4		
	BS EN 1186-7 (10% Ethanol)	A	6.1	3.1	Pass
		B	<1		
		C	3.2		
Requirement	-	-	-	<10 mg/dm²	-

Migration into vegetable oil

Sample	Test Method	Global migration (mg/dm ²)		Mean Global migration (mg/dm ²)	Pass/Fail
		A	B		
01068 (Black Ninja)	TES-AC-500/ BS EN 1186 (sunflower oil)	A	< 0.1	< 0.1	Pass
		B	< 0.1		
		C	< 0.1		
Requirement	-	-	-	<10 mg/dm²	-

Testing was carried out by an external laboratory

†Extractable metals analysis (Ba, Co, Cu, Fe, Li, Mn, Zn) on food stimulant extracts by ICP- OES

Sample tested	Simulant	Element (mg/kg of foodstuffs)						
		Ba	Co	Cu	Fe	Li	Mn	Zn
01068 (Black Ninja)	3% Acetic acid	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<1.0
Requirement of the Commission Regulation (EU) No 10/2011, Annex II		1	0.05	5	48	0.6	0.6	25

Results are the mean of triplicate determinations

APPENDICES:

The gloves described as 01068 (Black Ninja) are suitable for contact with the following food categories of foodstuffs as listed in 10/2011 Annex III, table 2.

Reference number	Description of foodstuffs
02	Cereals, cereal products, pastry, biscuits, cakes and other bakers' wares
02.05	Pastry, biscuits, cakes, bread, and other bakers' wares, dry: A. With fatty substances on the surface
02.06	Pastry, cakes, bread, dough and other bakers' wares, fresh: A. With fatty substances on the surface
03	Chocolate, sugar and products thereof Confectionery products
03.01	Chocolate, chocolate-coated products, substitutes and products coated with substitutes
03.02	Confectionery products: A. In solid form: I. With fatty substances on the surface B. In paste form: I. With fatty substances on the surface
03.03	Sugar and sugar products B. Molasses, sugar syrups, honey and the like

04	Fruit, vegetables and products thereof
04.01	Whole fruit fresh or chilled, unpeeled
04.02	Processed fruit: C. Fruit preserved in a liquid medium: I. In an oily medium
04.03	Nuts (peanuts, chestnuts, almonds, hazelnuts, walnuts, pine kernels and others): C. In paste or cream form
04.04	Whole vegetables, fresh or chilled
04.05	Processed vegetables: B. Fresh vegetables, peeled or cut D. Preserved vegetables: I. In an oily medium
05	Fats and oils
05.01	Animals and vegetable fats and oils, whether natural or treated (including cocoa butter, lard, resolidified butter)
05.02	Margarine, butter and other fats and oils made from water emulsions in oil
06	Animal products and eggs
06.01	Fish: A. Fresh, chilled, processed, salted or smoked including fish eggs B. Preserved fish: I. In an oily medium
06.02	Crustaceans and molluscs (including oysters, mussels, snails): A. Fresh within the shell B. Shell removed, processed, preserved or cooked with the shell I. In an oily medium
06.03	Meat of all zoological species (including poultry and game): A. Fresh, chilled, salted, smoked B. Processed meat products (such as ham, salami, bacon, sausages, and other) or in the form of paste, creams C. Marinated meat products in an oily medium
06.04	Preserved meat: A. In an fatty or oily medium
07	Milk products
07.04	Cheeses: B. Natural cheese without rind or with edible rind (gouda, camembert, and the like) and melting cheese D. Preserved cheese: I. In an oily medium

08	Miscellaneous Products
08.01	Vinegar
08.02	Fried or roasted foods: A. Fried potatoes, fritters and the like B. Of animal origin
08.03	Preparations for soups, broths, sauces, in liquid, solid or powder form (extracts, concentrates); homogenised composite food preparations, pre- pared dishes including yeast and raising agents A. Powdered or dried: I. With fatty character B. any other form than powdered or dried: I. With fatty character
08.04	Sauces: B. With fatty character e.g. mayonnaise, sauces derived from mayonnaise, salad creams and other oil/water mixtures e.g. coconut based sauces
08.05	Mustard (except powdered mustard under heading 08.14)
08.06	Sandwiches, toasted bread pizza and the like containing any kind of foodstuff A. With fatty substances on the surface
08.08	Dried foods: A. With fatty substances on the surface
08.11	Cocoa: B. Cocoa paste
08.15	Spices and seasoning in oily medium such as pesto, curry paste



Gloves described as 01068 (Black Ninja)

TERMS AND CONDITIONS OF BUSINESS

1. **GENERAL**
Work done or services undertaken are subject to the terms and conditions detailed below and all other conditions, warranties and representations, expressed or implied are hereby excluded.
2. **PRICES**
Prices are based on current material and production costs, exchange rates, duty and freight and are subject to change without notice.
3. **DELIVERY ESTIMATES**
Delivery estimates are made in good faith and date from receipt of a written order and full information to enable us to proceed. While SATRA or its subsidiaries (hereafter referred to as "SATRA") make every effort to fulfil them, such estimates are subject to unforeseen events and if not maintained, cannot give rise to any claim. Offers "ex stock" are subject to prior sale.
4. **CANCELLATION AND RETURNS**
Cancellation of orders for goods, services, training or consultancy is only acceptable by prior agreement of SATRA and a charge will normally be made.
5. **CLAIMS**
Claims for errors, shortages etc should be notified within 10 days of date of receipt. In the event of goods damaged in transit, packing materials should be retained for examination; otherwise no liability can be accepted.
6. **PAYMENT TERMS**
Payment terms are net 21 days from date of invoice. Failure to comply with the terms of payment may result in delayed delivery of goods and services and a review of the Customer's credit account. Should the customer become subject to an administration order, or becomes bankrupt or goes into liquidation, SATRA has a right to cancel any contract and discontinue any work. SATRA reserves the right to adjust US Dollar and Euro sales price where customer exceeds credit terms and where the exchange rate has moved more than 10% since invoicing.
7. **RETENTION OF TITLE**
All goods remain the property of SATRA until paid in full. Under no circumstances will a customer's purchase order override our Retention of Title clause. In the case of software, the ownership of the software remains with SATRA. Payment of invoices in full will entitle the customer to use the software under licence until (a) they cease to be a member of SATRA or (b) they cease trading. In both instances, the licence shall then revert to SATRA.
8. **GUARANTEE**
All goods manufactured by SATRA are guaranteed both as regards material and workmanship. Any part returned carriage paid, within twelve months from date of supply and found defective, will be repaired or replaced at SATRA's option free of charge. SATRA admits no liability for loss, damage or delay consequent on any defect in any goods supplied by SATRA.
9. **TEST REPORTS**
Results given in test reports refer only to samples submitted for analysis and tested by SATRA. A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the client as a result of information supplied in a test report.
10. **TEST SAMPLES**
Unless otherwise agreed in advance, test samples will be disposed of 6 weeks after the date of the final report. If required, samples can be returned at the Customer's expense.
11. **RESPONSIBILITY**
Every effort is made to ensure accuracy in description, drawings and other information in correspondence, catalogues, etc but no warranty is given in this respect and SATRA shall not be liable for any error therein. SATRA carries out all tests and/or advises only on the basis that the same are carried out, made or given without any responsibility whether for negligence or otherwise. SATRA and its servants or agents will not be liable for any damage or loss direct or indirect of whatsoever kind, whether or not the same results directly or indirectly from negligence on the part of SATRA or its servants or agents.
12. **CONFIDENTIALITY**
Unless specifically excluded in the terms of an individual contract between SATRA and its Customer, the following shall apply to all reports, advice, drawings, photographs, specifications or data:
 - i. The above shall not be disclosed to third parties or used in litigation without the consent of SATRA.
 - ii. Where SATRA has given consent to disclosure, the Customer shall draw the attention of the third party to these terms of business and the basis on which SATRA undertakes test, reporting and advising. The Customer shall indemnify SATRA for any failure to do so.
 - iii. The above items are submitted to the Customer as confidential documents. Confidentiality shall continue to apply after completion of the business, but shall cease to apply to information or knowledge which may come into the public domain.
13. **CONSTRUCTION AND ARBITRATION**
The laws of England shall govern all contracts and the parties submit to exclusive jurisdiction of the courts of England, unless otherwise agreed.

Issue Date: 1st October 2009

Signed:

