

PiCA GmbH, Rudower Chaussee 29, 12489 Berlin, Germany  
BOTT sp. z o.o.  
Agnieszka Kaczmarek  
ul. Budowlanych 8  
64-100 LESZNO  
**Polen**

your sign:  
our sign: 21-B129-0001A  
phone: see project manager below test result  
telefax: +49(0)30/2556600-1  
e-Mail: see project manager below test result

Berlin, 20.04.2021

## Test Report 21-B129-0001A

name and address of client: see address  
product type: material  
delivery condition:  
date of receipt: 03.03.2021  
testing (start/end): 03.03.2021/20.04.2021  
sample taken by: by client  
sample identification: Messlöffeln PIKO-S 75m1  
2d/20°C

### Test Report: overall migration isooctane

test method: LA-GC-017.01A\_10/27/2020  
based on DIN EN 1186

### test result

Test Report 21-B129-0001A

parameter	amount	results in	RL	OML	
				VO (EU) Nr. 10/2011	
* overall migration isooctane	<3	mg/dm <sup>2</sup>	3	10	mg/dm <sup>2</sup>

RL: reporting limit

The amount in [ ] is a semiquantitative valuation under reporting limit.

\*Die Bestimmung der Gesamtmigration erfolgte angelehnt an DIN EN 1186 von 2002 (Teil 1 bis 15) sowie Verordnung (EU) Nr. 10/2011 (14.09.2018). Entsprechend des Kundenwunsches findet als Simulanz Isooctan Anwendung. Die Migration erfolgte durch Befüllen mit 60 mL Simulanz. Somit ergibt sich ein Volumen zu Oberflächen Verhältnis von 80 mL/dm<sup>2</sup>. Die Prüfbedingungen entsprechen den vorgegebenen Parametern.

BG = Berichtsgrenze



**Denny Ruhweder**  
project manager  
laboratory technician

phone +49 30 255 66 00-51

e-mail denny.ruhweder@pica-berlin.de

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.

PiCA GmbH, Rudower Chaussee 29, 12489 Berlin, Germany  
BOTT sp. z o.o.  
Agnieszka Kaczmarek  
ul. Budowlanych 8  
64-100 LESZNO  
**Polen**

your sign:  
our sign: 21-B129-0001  
phone: see project manager below test result  
telefax: +49(0)30/2556600-1  
e-Mail: see project manager below test result

Berlin, 15.04.2021

## Test Report 21-B129-0001

name and address of client:	see address
product type:	material
delivery condition:	
date of receipt:	03.03.2021
testing (start/end):	03.03.2021/15.04.2021
sample taken by:	taken by client
sample identification:	Messlöffeln PIKO-S 75m1

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.

**Test Report: sensory analysis**

test method: extra\_

**test result**

**Test Report 21-B129-0001**

**Appearance:** transparent plastic spoon

With the aid of the present test in accordance with DIN 10955:2019-12 draft (Sensory testing - Testing of packaging materials and packaging materials for foodstuffs), it was found out whether the sample has an odour and contains substances which, under specified test conditions, transfer to the test substance by direct contact and influence its odour and taste.

**1) Test for odour emission**

For testing the odour emission, the sample was conditioned at room temperature for 24 hours in the dark. Then the sample was tasted by 7 testers and evaluated with regard to its odour impression. Half steps (0.5) were possible. A description of the odour impression was given from a rating of 2.0.

Tester	Odour
Tester 1	0
Tester 2	1
Tester 3	0
Tester 4	1
Tester 5	0
Tester 6	0
Tester 7	1,5
<b>Median</b>	<b>0</b>

Grade	
0	no noticeable odour deviation
1	just noticeable odour deviation
2	weak odour deviation
3	significant odour deviation
4	strong odour deviation

Note: According to DIN 10955:2019-12 (draft), the test of the odour emission of a packaging material is used as an internal quality test or preliminary test for the assessment of food conformity. The odour or taste deviation of the test food after storage with the packaging material to be tested compared to a reference that has been stored without packaging material is decisive for the test of food law conformity.

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.

**Test Report: sensory analysis**

test method: extra\_

**test result**

**Test Report 21-B129-0001**

**2) Testing for odour and taste deviation of a food after storage with direct contact of food and sample**

For testing the odour and taste deviation of a food after storage with direct contact to the sample, the sample was exposed to 200 ml 70°C warm water for 2 hours. After the end of the migration phase, the migrated water was tasted (orthonasal test) and (retronasal test) in a paired comparison test by 7 trained testers. The testers rated the test food (water) in terms of odour and taste deviation compared to a blank sample on a scale of 0 to 4. Half steps (0.5) were possible. From a rating of 2.0, a description had to be given.

Tester	Odour	Taste
Tester 1	0	0
Tester 2	0	1,5
Tester 3	0	0
Tester 4	0	1
Tester 5	1	1,5
Tester 6	0	1
Tester 7	1	1,5
<b>Median</b>	<b>0</b>	<b>1</b>

Grade	
0	no noticeable odour deviation
1	just noticeable odour deviation
2	weak odour deviation
3	significant odour deviation
4	strong odour deviation

**3) Evaluation**

Regarding the sensory tests for odour and taste deviation of a food after storage with direct contact of food and sample, no noticeable to just noticeable odour deviation could be identified by the testers. The median of the odour deviation of the 7 testers resulted in "no noticeable odour deviation" and the median of the taste deviation in "just noticeable odour deviation". The sensory results are thus to be assessed as inconspicuous.

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.



**Isabel Doerr**  
project manager  
Staatl. geprüfte Lebensmittelchemikerin  
phone +49 30 255 66 00-55  
e-mail isabel.doerr@pica-berlin.de

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.

PiCA GmbH, Rudower Chaussee 29, 12489 Berlin, Germany

BOTT sp. z o.o.

Agnieszka Kaczmarek

ul. Budowlanych 8

64-100 LESZNO

**Polen**

your sign:

our sign:

phone:

telefax:

e-Mail:

21-B129-0001B

see project manager below test result

+49(0)30/2556600-1

see project manager below test result

Berlin, 22.04.2021

## Test Report 21-B129-0001B

name and address of client:	see address
product type:	50% EtOH migrate of material sample
delivery condition:	
date of receipt:	03.03.2021
testing (start/end):	03.03.2021/22.04.2021
sample taken by:	taken by client
sample identification:	Messlöffeln PIKO-S 75m1 10d/40°C

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.

## Test Report: screening

test method: LA-GC-135.08\_6/27/2019

## test result


Test Report 21-B129-0001B

In der untersuchten Probe (Migrat 50% Ethanol: Messlöffeln PIKO-S 75ml) können mittels GC/MS nach Extraktion mit Hexan, folgende Verbindungen als Bibliotheksvorschläge der NIST17 (Übereinstimmung >60%) im Siedebereich C10 bis C40 identifiziert werden (siehe beigefügtes Chromatogramm):

RT[min]	Substanz (Bibliotheksvorschlag)	CAS	Konz. [µg/kg]
3,754	Naphthalene-D8	1146-65-2	interne Referenz
4,992	aliphatische Kohlenwasserstoffe	-	30
6,928	aliphatische Kohlenwasserstoffe	-	28
6,988	Butylated Hydroxytoluene	000128-37-0	350
8,88	Phenanthrene-D10	1517-22-2	interne Referenz
9,31	3-Hexadecanol	593-03-3	120
9,439	Isopropyl myristate	000110-27-0	380
10,059	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, methyl ester	006386-38-5	23
10,239	unbekannte Verbindung (m/z: 241, 111, 87)	-	39
10,523	Hexadecanoic acid, ethyl ester	000628-97-7	270
10,971	unbekannte Verbindung (m/z: 253, 239, 99, 81)	-	110
11,229	unbekannte Verbindung (m/z: 253, 227, 113)	-	31
11,719	Octadecanoic acid, ethyl ester	000111-61-5	200
14,824	Decachlorobiphenyl	-	* interne Referenz

Die abgeschätzte Bestimmungsgrenze je Einzelkomponente berechnet als PCB209 Äquivalent liegt bei je 10 µg/kg Migrat. Werte in eckigen Klammern sind halbquantitative Abschätzungen unterhalb der Bestimmungsgrenze, wenn die Substanz identifiziert werden kann, jedoch eine eindeutige Integration aufgrund einer ungenügenden Peakform nicht möglich ist. Die Angabe von CAS Nummer erfolgt nur bei Übereinstimmungen mit der NIST Bibliothek > 80%. Die angegebenen CAS Nummern sind auch bei hoher Übereinstimmung mit der verwendeten Bibliothek nur mögliche Vorschläge isomerer Formen. Eine sicherere Aussage ist nur in Verbindung mit weiteren Analysen unter Verwendung externer Standards möglich. Im Chromatogramm nicht integrierte Peaks, stammen aus dem verwendeten Blindwert.

\*: interne Referenz Decachlorobiphenyl (PCB209) - Verwendung zur halbquantitativen Gehaltsbestimmung

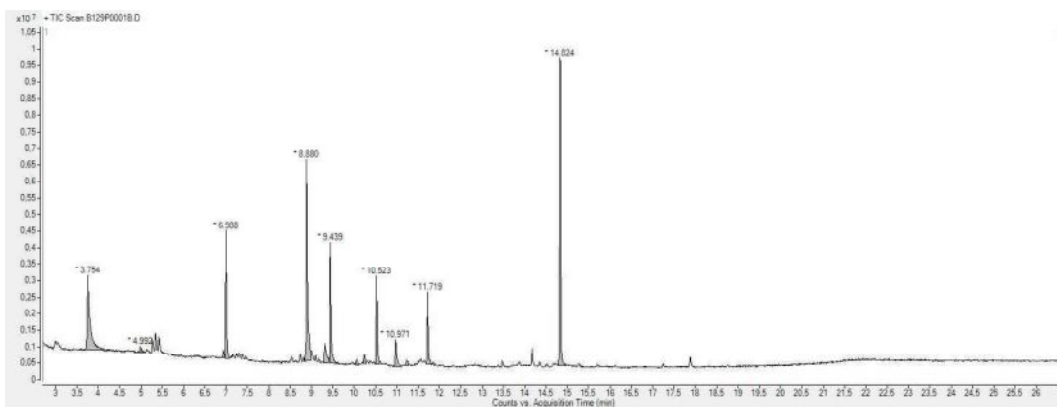


**Juliane Scholl**  
project manager  
food chemist

phone +49 30 255 66 00-81

e-mail juliane.scholl@pica-berlin.de

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.



Messlöffeln PIKO-S 75m1 ;  
;  
10d/40°C ;

The test results relate only to the items tested. The test report shall not be reproduced except in full without the written approval of the testing laboratory.