CompactDry™ SL Obtained MicroVal certification

CompactDry™ SL for Salmonella detection has been demonstrated to provide reliable results comparable to those obtained by the reference method, ISO 6579-1:2017+A1:2020. Recently, it was certified by MicroVal, a European third-party certification body, as an alternative method to the ISO reference method for two food categories and environmental samples. In this article, we present excerpts from the evaluation report



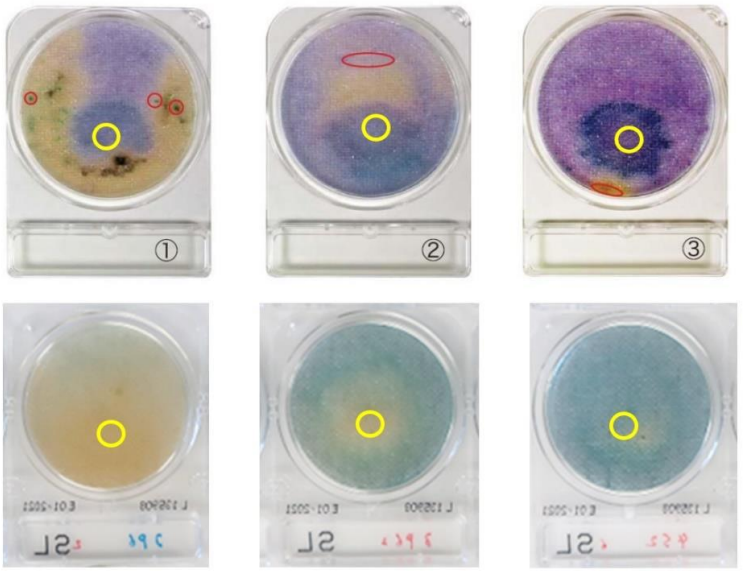
【Scope of Certification】
RTE/RTRH* meat and poultry products, eggs and egg products, environmental samples
Examples: sliced ham, liquid egg, process water, etc.
*RTE: Ready To Eat (can be eaten immediately),
RTRH: Ready To Reheat (can be consumed after reheating)

【Certified Procedure】
① Add the sample to Buffered Peptone Water (BPW) and pre-enrich at 36 ± 1°C for 22 ± 2 h (For environmental samples such as swab samples, add the sample to BPW as well.)
② Inoculate 0.1 mL of the enrichment culture onto CompactDry™ SL, then add 1 mL of sterile purified water.
③ Incubate at 41.5 ± 1°C for 22 ± 2 h and interpret the results.
**Certification was obtained using the ISO method incubation temperature of 41.5°C.

【Interpretation】
Observe the color change of the sheet

<Salmonella Positive>
The sheet changes color from blue-purple to yellow.
[Additional Characteristics]A yellow spreading zone (motility) and black to green isolated or merged colonies may be observed.

<Positive Example>



○ : Black to green colonies
○ : Inoculation point

<Salmonella Negative>
The sheet shows no color change, or changes to red to reddish-purple.

<Negative Example>



【Note】 *Pseudomonas* spp. and *Proteus* spp. may rarely cause yellow discoloration of the sheet. If suspected, collect material from the yellowed area and streak onto a selective agar medium, such as MLCB agar, for isolation and subsequent identification.

Shimadzu Diagnostics Corporation
Customer Support Section
Tel: +81-3-5846-5707
E-mail: contact@sdc.shimadzu.co.jp

Copyright © Shimadzu Diagnostics Corporation. All rights reserved.

Shimadzu Diagnostics Corporation Technical product information

【Validation Study】
The performance of CompactDry™ SL was compared with ISO 6579-1:2017+A1:2020 (Salmonella detection method) in accordance with ISO 16140-2:2016(Protocol for the validation of alternative methods against a reference method).
■ Reference Method: ISO 6579-1:2017+A1:2020 (ISO Method)(① Pre-enrichment in BPW,② Selective enrichment in RVS broth and MKTTn broth,③ Isolation on XLD agar and BGS agar,④ Confirmation tests)
■ Alternative Method: CompactDry™ SL (CDSL Method)(① Pre-enrichment in BPW,② Cultivation using CompactDry™ SL,③ Isolation by conventional culture methods,④ Confirmation tests)
■ Test Samples:RTE/RTRH meat and poultry products, eggs and egg products, and environmental samples

【Result】
Comparison of CompactDry™ SL (CDSL Method) and ISO 6579-1:2017+A1:2020 (ISO Method)

＜Agreement＞

RTE/RTRH meat and poultry products

	ISO method Positive	ISO method Negative
CDSL method Positive	29	0
CDSL method Negative	1	30

Positive Agreement Rate : 96.7%
Negative Agreement Rate : 100%

Eggs and egg products

	ISO method Positive	ISO method Negative
CDSL method Positive	28	0
CDSL method Negative	2	30

Positive Agreement Rate : 93.3%
Negative Agreement Rate : 100%

Environmental samples

	ISO method Positive	ISO method Negative
CDSL method Positive	30	0
CDSL method Negative	0	30

Positive Agreement Rate : 100%
Negative Agreement Rate : 100%

Overall samples Positive Agreement rate : 96.7%、Negative Agreement rate ：100%
→The number of deviations was within the acceptance criteria for all categories.

＜Level of Detection＞

Category	RLOD ※1 (CDSL/ISO)
RTE/RTRH meat and poultry products	1.000
Eggs and egg products	1.161
Environmental samples	1.000

Category	LOD50 ※2 (additional information)	
	CDSL※3	ISO ※3
RTE/RTRH meat and poultry products	0.399	0.399
Eggs and egg products	0.918	0.800
Environmental samples	0.200	0.200

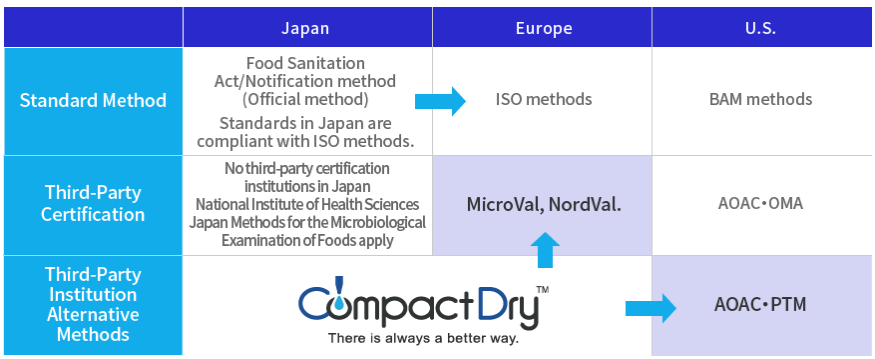
*1 RLOD (Relative Level of Detection): Ratio of the detection level of the alternative method (CDSL method) to that of the reference method (ISO method).
*2 LOD50 (Level of Detection 50): The number of Salmonella cells at which a 50% positive result is expected with the test method.
*3 Unit of measurement: Food samples: CFU/25 g (colony-forming units per 25 g of food sample)
Test portion of environmental samples: CFU/test portion (colony-forming units per test portion of environmental sample)

→The RLOD values for all categories were within the acceptance limit of 1.5, and the differences in LOD50 values were within the acceptable range.

【Summary】
Based on the analysis conducted in accordance with ISO 16140-2:2016, no statistically significant differences were observed between the CDSL method and the ISO reference method for the detection of Salmonella.These results demonstrate that CompactDry™ SL is a useful and convenient alternative method for the detection of Salmonella.

【International Certification】
International certification is granted to test methods that have been validated by an independent international certification organization. Certified methods are recognized as alternative methods to standard reference methods.
AOAC OMA、AOAC PTM(USA)、MicroVal(Netherlands)、NordVal(Norway)、AFNOR(France) etc

MicroVal certification is an internationally recognized certification program for microbiological test methods that have been evaluated according to the validation protocols specified in ISO 16140-2:2016 or ISO 16140-6:2019. As one of the major international certification schemes alongside AOAC OMA, NordVal, and AFNOR Certification, MicroVal provides independent verification of the performance of alternative microbiological methods. Methods certified by MicroVal are internationally accepted as alternative methods to corresponding ISO reference methods.



Shimadzu Diagnostics Corporation
Customer Support Section
Tel: +81-3-5846-5707
E-mail: contact@sdc.shimadzu.co.jp

Copyright © Shimadzu Diagnostics Corporation. All rights reserved.