

Instructions to Participating Laboratories

KOLAS PT-2019-07, Pesticides (DDT)



2019. August

KOLAS PROFICIENCY TESTING PROGRAM



KOLAS (Korea Laboratory Accreditation Scheme)

All laboratories participating in this proficiency testing program shall be fully aware of the following notices before measuring the proficiency testing artifacts.

1. Introduction

1.1 The purpose of this Proficiency Testing (PT) is to monitor the capabilities of the participating laboratories to perform water quality analysis and to enhance their quality assurance of measurements.

1.2 This proficiency testing is composed of testing pesticides (DDT) in water.

2. Responsibilities

Water Quality & Safety Research Center (K-water) is responsible for preparing, packaging and dispatching samples, collecting test results from participating laboratories, conducting statistical analyses of the data, handling participants' queries and issuing final reports. K-water is the proficiency testing provider accredited by KOLAS on the basis of ISO/IEC 17043.

3. Invitation of participants

3.1 If you would like to join this proficiency testing program, please complete the attached '*APPLICATION FORM*' and then fax (+82-42-629-4739) or e-mail (sunhonglee@kwater.or.kr, yunskim@kwater.or.kr) it to us by Sep. 11, 2019.

- Application fee: 0 (Free Application, The application limits its participants to 10 institutes per country, in the order of arrivals.)
- See '*APPLICATION FORM*', *English-only*

3.2 The term of testing: September 19 to October 18, 2019

4. Proficiency testing artifacts

4.1 Information about the artifacts

One artifact (10 mL) will be provided to the participants. The second one will be provided with participants' request as a back-up in case the original artifact breaks or becomes unusable. The artifact is a transparent and colorless one including DDT. This concentrate is preserved with methanol. The concentrate can be stored at cooling or room temperature.

Please TEST after 10 TIMES DILUTION.

Table 1 shows the final concentration range.

Unit \ Item	DDT	Note
mg/L	0.001 ~ 1.000	Result of 10 times dilution

4.2 Receipt of the sample

The artifacts will be sent by air freight. Once the sample is received, please complete the attached ***“RECEIPT FORM”*** and then **fax (+82-42-629-4739) or e-mail (sunhonglee@kwater.or.kr, yunskim@kwater.or.kr) within 3 days of receipt.**

5. Test

5.1 Preparation

Proper dilution procedure is as follows:

- Fill up a 100 mL flask with about 90 mL of purified water.
- Add 10 mL of the provided artifact to the flask.
- Fill the flask with purified water to exactly 100 mL.

- Use the sample as a final analytical artifact.

5.2 Test conditions

Please complete the testing as soon as possible after open the artifact.

All standard methods for DDT in water can be used.

(Recommend participants' usual test method.)

Note the test method and equipment used.

If you are using Standard 6630 (23rd edition), you would report 1) test method; liquid-liquid extraction gas chromatographic method, 2) equipment; GC or GC-MS.

5.3 Laboratory safety

The artifact should be handled in a laboratory. The analyst should have experience in handling, disposing of, and applying appropriate testing methods. Safety devices (safety goggles, hood system, etc.) should be fully equipped. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Material Safety Data Sheets (MSDS) for the sample are available upon request.

6. Submission of results

Participants should submit their results electronically by **fax (+82-42-629-4739) or e-mail** (sunhonglee@kwater.or.kr, yunskim@kwater.or.kr) before the deadline (**Oct. 18, 2019**).

Results submitted after the deadline will not be accepted. Under no circumstances, corrections or adjustments of the analytical data will be accepted after submission.

*** Participants should be aware that all submitted results are considered to be final and accordingly such data and units should be thoroughly checked before submission.**

7. Performance assessment

Performance of the participating laboratories will be assessed using *z-score*¹⁾ which is calculated as :

$$z_i = \frac{x_i - x_{pt}}{\sigma_{pt}}$$

x_i : reported result of individual participant

x_{pt} : assigned value

σ_{pt} : Standard deviation of participants' results

z-score is commonly interpreted as:

- (i) $|z| \leq 2$ Satisfactory
- (ii) $2 < |z| < 3$ Questionable
- (iii) $|z| \geq 3$ Unsatisfactory

(1) To know more information, please refer to 'ISO 13528'.

Laboratories having a $|z|$ score equal to or larger than 3 shall have their results thoroughly investigated do determine the discrepancy and those having a *z-score* in the range $2 < |z| < 3$ are also encouraged to review their results.

8. Confidentiality

Each laboratory will be assigned a unique identification code. This unique code will be used in the report.

9. General Information

For general queries, please contact us:

Sunhong Lee or Yun S. Kim (Water Quality & Safety Research Center, K-water)

Tel.: +82-42-629-4765, 4766

Fax: +82-42-629-4739

E-mail: sunhonglee@kwater.or.kr, yunskim@kwater.or.kr

Address: Water Quality Safety & Research Center, K-water

200 Shintanjinro, Daedeok, Daejeon, Republic of Korea 34350

10. Program Schedule

Event	Period
Invitation of participants	August, 2019
Submission of results	October, 2019
Distribution of final report to the participants	November, 2019

PARTICIPATANT APPLICATION
FOR THE PROFICIENCY TESTING PROGRAM
(KOLAS PT-2019-07, DDT in Water)

In order to monitor the progress of inter-laboratory comparisons, we kindly ask each laboratory to fill in this '*APPLICATION FORM*' and e-mail it to the contact information provided afterwards.

APPLICATION FORM

Name of Laboratory			
Technical manager	Signature : _____		
Address	Zip code : _____		
Accreditation Body :	Accreditation No. :		
Contact Person	Tel		
	Fax		
	E-mail		

Water Quality & Safety Research Center, K-water
Sunhong Lee or Yun S. Kim
Tel.: +82-42-629-4765 or 4766, **Fax:** +82-42-629-4739
E-mail: sunhonglee@kwater.or.kr, yunskim@kwater.or.kr
Address: Water Quality & Safety Research Center, K-water
 200 Shintanjinro, Daedeok, Daejeon, Republic of Korea 34350

RECEIPT FORM

(KOLAS PT-2019-07, DDT in Water)

In order to monitor the progress of inter-laboratory comparisons, we kindly ask each laboratory to fill in this “*RECEIPT FORM*” and fax or e-mail the form to the contact information provided afterwards.

Thank you in advance for your cooperation.

The KOLAS PT-2019-07 artifacts were received on: _____ (date)

After inspection, were the contents damaged? _____ (yes/no)

If yes, were the contents seriously damaged? _____ (yes/no)

If yes, were the contents still suitable for use? _____ (yes/no)

Remarks: _____

Participating Laboratory: _____

Contact Person:

Fax: _____

E-mail: _____

Water Quality & Safety Research Center, K-water

Sunhong Lee or Yun S. Kim

Tel.: +82-42-629-4765 or 4766, **Fax:** +82-42-629-4739

E-mail: sunhonglee@kwater.or.kr, yunskim@kwater.or.kr

Address: Water Quality & Safety Research Center, K-water

200 Shintanjinro, Daedeok, Daejeon, Republic of Korea 34350

RESULTS SHEET**(KOLAS PT-2019-07, DDT in Water)**

Laboratory Code :

(The number located on the label of each bottle)

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Test Items		Result (mg/L)	Measurement of Uncertainty (mg/L)	Test Method and Equipment
DDT	1			
	2			
	3			
	Mean			
	1			
	2			
	3			
	Mean			

Note)

1. Fill in every blank including the testing method used and equipment.
2. Write down the result of 10 times dilution to **THREE-TENTH** of a decimal.
(Form of 4 digits; X.XXX)
3. Report all test results (more than 3times) for accurate statistical analysis.
4. Measurements of uncertainties should be written to three-tenth of a decimal.
5. If the result is not detected, please write down the limit of quantitation.

Remarks: _____

(Comment your opinion on this PT program)

Participating Laboratory: _____

Contact Person: _____

Fax: _____

E-mail: _____ (please write down as a print letter)

Date: _____

Signature: _____