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To the Laboratory Management or to whom it may concern

From: Edward F. Askew PhD, President, Askew Scientific Consulting in substitution of Merck KGaA, Darmstadt, Germany.

Certificate for USEPA Equivalency Test Kits

For Spectroquant[®] Test Kits of Merck KGaA, Darmstadt, Germany for Clean Water Act (CWA) Regulatory Testing.

The below mentioned Spectroquant[®] Test Kits that your laboratory is utilizing for regulatory compliance with the Clean Water Act have been reviewed for compliance with the currently promulgated 40 CFR part 136 methods listed in Table IB. An equivalency approval letter is no longer produced by USEPA, instead it is the responsibility of the developer and the laboratory to document equivalency. Utilizing the flexibility guidelines detailed in the EPA memo (Richard Reding, Nov. 20, 2007), we created this certificate of compliance to assure users that all the specifications required of the developer are met and documentation will be provided to the laboratories on our website. This certificate is valid for the test kits and application as following described:

This document refers to the following Spectroquant® test kits and all available pack sizes:

Catalogue Number	Spectroquant® Test kits	Measuring range	USEPA Equivalency for	
			Clean Water Act	Safe Drinking Water Act
1.14542	Nitrate Cell Test	0.5-18.0 mg/L NO ₃ -N 2.2 – 79.7 mg/L NO ₃	Yes	
1.14563	Nitrate Cell Test	0.5 - 25.0 mg/L NO ₃ -N 2.2 – 110.7 mg/L NO ₃	Yes	
1.14764	Nitrate Cell Test	1.0 - 50.0 mg/L NO ₃ -N 4 – 221 mg/L NO ₃	Yes	
1.00614	Nitrate Cell Test	23-225 mg/L NO ₃ -N 102 – 996 mg/L NO ₃	Yes	
1.09713	Nitrate Test	0.10-25.0 mg/L NO ₃ -N 0.4 – 110.7 mg/L NO ₃	Yes	
1.14773	Nitrate Test	0.2-20.0 mg/L NO ₃ -N 0.89 – 88.5 mg/L NO ₃	Yes	
1.01842	Nitrate Test	0.3-30.0 mg/L NO ₃ -N 1.3 – 132.8 mg/L NO ₃	Yes	
1.14556	Nitrate Cell Test in seawater	0.10-3.00 mg/L NO ₃ -N 0.4 – 13.3 mg/L NO ₃	Yes	
1.14942	Nitrate Test in seawater	0.2-17.0 mg/L NO ₃ -N 0.9 – 75.3 mg/L NO ₃	Yes	

The Spectroquant® Equivalency documents covers all pack sizes, cells and citation units mentioned in the insert sheet of the test kit. Developer equivalency reports, EPA formatted methods and auditor/laboratory checklists can be obtained from

<http://www.emdmillipore.com/USEPA>

Each Spectroquant® Test Kit was evaluated and met the following criteria:

The Spectroquant® test kit had the identical chemistry and method analytical results as required by an approved EPA method listed in Table IB. A summary report is provided at:

<http://www.emdmillipore.com/USEPA>

The Spectroquant® test kit has equivalent chemistry as outlined in 40 CFR part 136.6. The equivalent test kit had a single laboratory validation performed by Askew Scientific Consulting LLC and the data comparing the modified method performance to the approved method demonstrated that the method is capable of yielding reliable data for compliance monitoring purposes. Equivalency was established by demonstrating that the modified method produces results that meet or exceed the QC acceptance criteria of the EPA-designated approved method. The final equivalency report listing these requirements as per the Richard Reding memo (Nov. 20, 2007) along with the laboratory support documents are provided at:

<http://www.emdmillipore.com/USEPA>

Askew Scientific Consulting LLC provides consultancy service to Merck KGaA, Darmstadt, Germany and provided this document to assure users that everything is in compliance with EPA specification.

Additional information and support for your laboratory can be obtained from Merck KGaA, Darmstadt, Germany representative. Please feel free to get in contact via <http://www.emdmillipore.com/USEPA>

February 16th, 2017

A handwritten signature in black ink, appearing to read "Edward F. Askew". The signature is fluid and cursive, with a large initial "E".

Edward F. Askew PhD
Thu Feb 16 2017 11:13:17

Edward F. Askew PhD
President, Askew Scientific Consulting LLC