独立行政法人製品評価技術基盤機構
平成 22 年度委託調査

調査報告書

各種試験のテストガイドライン英語文書の内容の比較

平成 23 年 3 月

株式会社　住化分析センター

各種試験のテストガイドライン英語文書の内容の比較

1. 目的

国際的に主要と考えられる OECD、EU、米国 EPA のテストガイドラインの試験法を比較し、概要や相違点などを把握する調査を行なう。

2. 調査期間

平成 22 年 12 月 7 日～平成 23 年 3 月 25 日

3. 調査内容および方法

指定の調査対象資料（OECD、EU および米国 EPA の規格）について､概要の作成および内容の比較表を作成した。調査対象の規格を表 1 に示す。

3.1 比較表の作成

対比する各規格の試験条件等について、比較する表を作成した。異なる条件や幅のある条件が結果に与える影響について考察した。

3.2 概要の作成

調査対象規格の概要を作成した。

4. 結果

各規格の対比の状況を表 2 に示す。

比較表を付属書 1 に示す。

概要を付属書 2 に示す。

5. 添付資料

付属書 1　比較表

付属書 2　概要

表 1　調査対象の規格

表 1-1　OECD

OECD		調査対象	
項目番号	項目名	概要の作成	比較表の作成
102	Melting Point/Melting Range	−	○
103	Boiling Point	−	○
104	Vapor Pressure	○	○
105	Water Solubility(Column Elution Method-Flask Method)	−	○
106	Adsorption/Desorption	○	○
107	Partition Coefficient(n-octanol/water)	−	○
109	Density of Liquids and Solids	−	○
111	Hydrolysis as a Function of pH	○	○
117	Partition Coefficient(n-octanol/water),High Performance Liquid Chromatography(HPLC)Method	○	○
120	Solution/Extraction Behavior of Polymers in Water	○	○
121	Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC)	○	○
123	Partition Coefficient (1-Octanol/Water): Slow-Stirring Method	○	○
301	Ready Biodegradability	−	○
302A	Inherent Biodegradability: Modified SCAS Test	−	○
302B	Inherent Biodegradability: Zahn-Wellens/ EVPA Test	−	○
302C	Inherent Biodegradability: Modified MITI Test (II)	○	○
303	Simulation Test - Aerobic Sewage Treatment -- A: Activated Sludge Units; B: Biofilms	○	○
304A	Inherent Biodegradability in Soil	−	○
305	Bioconcentration: Flow-through Fish Test	−	○
306	Biodegradability in Seawater	−	○
307	Aerobic and Anaerobic Transformation in Soil	○	○
308	Aerobic and Anaerobic Transformation in Aquatic Sediment Systems	○	○
309	Aerobic Mineralization in Surface Water – Simulation Biodegradation Test	○	○
310	Ready Biodegradability - CO2 in sealed vessels (Headspace Test)	○	○
311	Anaerobic Biodegradability of Organic Compounds in Digested Sludge: by Measurement of Gas Production	○	○
312	Leaching in Soil Columns	○	○
313	Estimation of Emissions from Preservative - Treated Wood to the Environment Laboratory Method for Wooden Commodities that are not Covered and are in Contact with Fresh Water or Seawater	○	○
314	Simulation Tests to Assess the Biodegradability of Chemicals Discharged in Wastewater	○	○
315	Bioaccumulation in Sediment-dwelling Benthic Oligochaetes	○	○
316	Phototransformation of Chemicals in Water – Direct Photolysis	○	○
317	Bioaccumulation in Terrestrial Oligochaetes	○	○

表 1-2　EU

EU		調査対象	
項目番号	項目名	概要の作成	比較表の作成
A01	MELTING/FREEZING TEMPERATURE	○	○
A02	BOILING TEMPERATURE	○	○
A04	VAPOUR PRESSURE	○	○
A06	WATER SOLUBILITY	○	○
A08	PARTITION COFFICIENT	○	○
C04	DETERMINATION OF 'READY BIODEGRADABILITY'	○	○
C05	DEGRADATION -BIOCHEMICAL OXYGEN DEMAND	○	○
C06	DEGRADATION - CHEMICAL OXYGEN DEMAND	○	○
C07	DEGRADATION -ABIOTIC DEGRADATION HYDROLYSIS AS A FUNCTION OF pH	○	○
C09	BIODEGRADATION ZAHN -WELLENS TEST	○	○
C10	BIODEGRADATION ACTIVATED SLUDGE SIMULATION TESTS	○	○
C11	BIODEGRADATION ACTIVATED SLUDGE RESPIRATION INHIBITION TEST	○	○
C12	BIODEGRADATION MODIFIED SCAS TEST	○	○
C13	BIOCONCENTRATION：FLOW-THROUGH FISH TEST	○	○
C19	ESTIMATION OF THE ADSORPTION COFFICIENT (Koc) ON SOIL AND ON SEWAGE SLUDGE USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY	○	○

表 1-3　EPA

EPA		調査対象	
項目番号	項目名	概要の作成	比較表の作成
830.6314	Oxidation/Reduction Chemical Incompatibility	○	○
830.7000	pH	○	○
830.7200	Melting Point/Melting Range	○	○
830.7220	Boiling Point/Boiling Range	○	○
830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method	○	○
830.7560	Partition Coefficient (n-octanol/water), Generator Column Method	○	○
830.7570	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography	○	○
830.7840	Water Solubility: Column Elution Method; Shake Flask Method	○	○
830.7860	Water Solubility, Generator Column Method	○	○
830.7950	Vapor Pressure	○	○
835.1220	Sediment and Soil Adsorption / Desorption Isotherm	○	○
835.1230	Adsorption/Desorption (Batch Equilibrium)	○	○
835.2120	Hydrolysis	○	○
835.3100	Aerobic Aquatic Biodegradation	○	○
835.3110	Ready Biodegradability	○	○
835.3140	Ready Biodegradability – CO2 in Sealed Vessels (Headspace Test)	○	○
835.3160	Biodegradability in Sea Water	○	○
835.3170	Shake Flask Die-Away Test	○	○
835.3180	Sediment/Water Microcosm Biodegradation Test	○	○
835.3190	Aerobic Mineralization in Surface Water – Simulation Biodegradation Test	○	○
835.3200	Zahn-Wellens/EMPA Test	○	○
835.3210	Modified SCAS Test	○	○
835.3215	Inherent Biodegradability – Concawe Test	○	○
835.3220	Porous Pot Test	○	○
835.3240	Simulation Test – Aerobic Sewage Treatment: A. Activated Sludge Units	○	○
835.3260	Simulation Test – Aerobic Sewage Treatment: B. Biofilms	○	○
835.3280	Simulation Tests to　Assess the Primary and Ultimate Biodegradability of Chemicals Discharged to Wastewater	○	○
835.3300	Soil Biodegradation	○	○
835.3400	Anaerobic Biodegradability of Organic Chemicals	○	○
835.3420	Anaerobic Biodegradability of Organic Compounds in Digested Sludge: By Measurement of Gas Production	○	○
835.5045	Modified SCAS Test for Insoluble and Volatile Chemicals	○	○
835.5154	Anaerobic Biodegradation in the Subsurface	○	○

表２　各規格の対比の状況

OECD		EU		EPA	
項目番号	項目名	項目番号	項目名	項目番号	項目名
102	Melting Point/Melting Range	A.1.	MELTING/FREEZING TEMPERATURE	830.7200	Melting Point/Melting Range (March 1998)
103	Boiling Point	A.2.	BOILING TEMPERATURE	830.7220	Boiling Point/Boiling Range (August 1996)
104	Vapour Pressure	A.4.	VAPOUR PRESSURE	830.7950	Vapor Pressure (August 1996)
105	Water Solubility(Column Elution Method-Flask Method)	A.6	WATER SOLUBILITY	830.7840	Water Solubility: Column Elution Method; Shake Flask Method (March 1998)
				830.7860	Water Solubility, Generator Column Method (March 1998)
106	Adsorption/Desorption			835.1230	Adsorption/Desorption (Batch Equilibrium) (November 2008)
				835.1220	Sediment and Soil Adsorption/Desorption Isotherm
121	Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC)	C19	Estimaton of the adsorption cofficient(Koc) on soil and on sweage sludge using high performance liquid chromatography(HPLC)		
107	Partition Coefficient(n-octanol/water)	A8	Partitision Cofficients	830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method (August 1996)
117	Partition Coefficient(n-octanol/water),High Performance Liquid Chromatography(HPLC)Method			830.7570	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography (August 1996)
				830.7560	Partition Coefficient (n-octanol/water), Generator Column Method (August 1996)
123	Partition Coefficient (1-Octanol/Water): Slow-Stirring Method				
111	Hydrolysis as a Function of pH	C.7.	DEGRADATION -ABIOTIC DEGRADATION HYDROLYSIS AS A	835.2120	Hydrolysis (November 2008)
301	Ready Biodegradability	C.4	Determintion of Ready Biodegradability	835.3110	Ready Biodegradability (January 1998)
302C	Inherent Biodegradability: Modified MITI Test (II)				
314	Simulation Tests to Assess the Biodegradability of Chemicals Discharged in Wastewater			835.3280	Simulation Tests to Assess the Primary and Ultimate Biodegradability of Chemicals Discharged to Wastewater (October 2008)
310	Ready Biodegradability - CO2 in sealed vessels (Headspace Test)			835.3140	Ready Biodegradability – CO2 in Sealed Vessels (Headspace Test) (November 2008)
				835.3215	Inherent Biodegradability – Concawe Test (October 2008)
302A	Inherent Biodegradability: Modified SCAS	C. 12.	BIODEGRADATION MODIFIED SCAS	835.3210	Modified SCAS Test (January 1998)
				835.5045	Modified SCAS Test for Insoluble and Volatile Chemicals (January 1998)
302B	Inherent Biodegradability: Zahn-Wellens/ EVPA Test	C. 9.	BIODEGRADATION ZAHN -WELLENS TEST	835.3200	Zahn-Wellens/EMPA Test (January 1998)
303	Simulation Test - Aerobic Sewage Treatment -- A: Activated Sludge Units; B:	C. 10.	BIODEGRADATION ACTIVATED SLUDGE SIMULATION TESTS	835.3240	Simulation Test – Aerobic Sewage Treatment: A. Activated Sludge Units
				835.3260	Simulation Test – Aerobic Sewage Treatment: B. Biofilms (October 2008)
				835.3220	Porous Pot Test (January 1998)
311	Anaerobic Biodegradability of Organic Compounds in Digested Sludge: by Measurement of Gas Production			835.3420	Anaerobic Biodegradability of Organic Compounds in Digested Sludge: By Measurement of Gas Production (October
				835.3400	Anaerobic Biodegradability of Organic Chemicals (January 1998)
309	Aerobic Mineralisation in Surface Water – Simulation Biodegradation Test			835.3190	Aerobic Mineralization in Surface Water – Simulation Biodegradation Test (October
306	Biodegradability in Seawater			835.3160	Biodegradability in Sea Water (January
308	Aerobic and Anaerobic Transformation in Aquatic Sediment Systems			835.3180	Sediment/Water Microcosm Biogradation Test (January 1998)
				835.3170	Shake Flask Die-Away Test (January 1998)
304A	Inherent Biodegradability in Soil			835.3300	Soil Biodegradation (January 1998)
307	Aerobic and Anaerobic Transformation in Soil			835.5154	Anaerobic Biodegradation in the Subsurface (January 1998)
				835.3100	Aerobic Aquatic Biodegradation (January
		C.5	DEGRADATION -BIOCHEMICAL OXYGEN DEMAND		
		C.6.	DEGRADATION - CHEMICAL OXYGEN DEMAND		
		C. 11.	BIODEGRADATION ACTIVATED SLUDGE RESPIRATION INHIBITION		
305	Bioconcentration: Flow-through Fish Test	C.13	BIOCONCENTRATION : FLOW-THROUGH FISH TEST		
317	Bioaccumulation in Terrestrial Oligochaetes				
315	Bioaccumulation in Sediment-dwelling Benthic Oligochaetes				
109	Density of Liquids and Solids			830.6314	Oxidation/Reduction Chemical Incompatability (August 1996)
120	Solution/Extraction Behavour of Polymers in Water			830.7000	pH (August 1996)
312	Leaching in Soil Columns				

— 以 上 —