

## ISO/TC61/SC5/WG22

### Working Group on the biodegradability of plastics

#### The background

The United Nations Conference on Environment and Development was held in Rio de Janeiro, Brazil, in 1992 to address global environmental issues, such as global warming and acid rain that are common to all humankind, and to foster International cooperation based on the principle of sustainable development.

#### The beginnings

Well before the establishment of TC207 (Environmental management system) in 1993, members of TC61/SC5 agreed on the creation of a new working group (WG22) on biodegradability of plastics at the ISO/TC61 annual meeting held in Beijing, China, in 1992.

The first WG22 meeting was held on September 20, 1993, in Stresa, the scenic city on the shores of Lake Maggiore in Italy.

Convened by Japan, the working group which aim is to address environmental issues, started to work on the aerobic biodegradability test methods based on the degree of biodegradation rates measured by the oxygen consumption in the presence of activated sludge based on the Japanese test method JISK6950 as a new work item.

In 1994, at the ISO/TC61 meeting in Tokyo, Japan, the test methods for biodegradable plastics were approved as five new work items.

#### The results of WG22 efforts

Experts of WG22 come from 13 different countries. Since its inception, more than 20 participants have always attended the working group meetings.

After long and earnest discussions, fourteen ISO standards have been developed over the years.

ISO14021 [Environmental labels and declarations -- Self-declared environmental claims (Type II environmental labelling)] published in 1999 by TC207/SC3 quotes three ISO standards i.e. ISO 14851, ISO 14852 and ISO 14855, developed by WG22.

With the advent of industrial and economic globalization, WG22 should actively participate in the development of ISO standards for biodegradable plastics in the future.

## ISO Standards developed by TC61/SC5/WG22

Reference number	Environmental	
ISO 14851	Aerobic	Aqueous
ISO 14852	Aerobic	Aqueous
ISO 14855-1	Aerobic	Compost
ISO 14855-2	Aerobic	Compost
ISO 17088	Aerobic	Compost (Specifications)
ISO 17556	Aerobic	Soil
ISO 14853	Anaerobic	Aqueous
ISO 15985	Anaerobic	High solids
ISO 13975	Anaerobic	Slurry phase (Biorecycling)
ISO 10210	Aerobic	Aqueous
	Anaerobic	Terrestrial
ISO 20200	Aerobic	Compost (Disintegration)
ISO 16929	Aerobic	Compost (Disintegration)
ISO 18830 <sup>a</sup>	Aerobic	Marine
ISO 19679 <sup>a</sup>	Aerobic	Marine

<sup>a</sup> To be published.

## ISO/TC61 meeting venues

41 <sup>st</sup> 1992 Beijing	42 <sup>nd</sup> 1993 Stresa
43 <sup>rd</sup> 1994 Tokyo	44 <sup>th</sup> 1995 London
45 <sup>th</sup> 1996 Montreal	46 <sup>th</sup> 1997 Davos
47 <sup>th</sup> 1998 Whistler	48 <sup>th</sup> 1999 Williamsburg
49 <sup>th</sup> 2000 Poitiers	50 <sup>th</sup> 2001 Berlin
51 <sup>st</sup> 2002 Quebec	52 <sup>nd</sup> 2003 Maastricht
53 <sup>rd</sup> 2004 Chengdu	54 <sup>th</sup> 2005 Jeju
55 <sup>th</sup> 2006 Yokohama	56 <sup>th</sup> 2007 Goa
57 <sup>th</sup> 2008 Orlando	58 <sup>th</sup> 2009 Rome
59 <sup>th</sup> 2010 Bangkok	60 <sup>th</sup> 2011 Kuala Lumpur
61 <sup>th</sup> 2012 Barcelona	62 <sup>nd</sup> 2013 Suzhou
63 <sup>rd</sup> 2014 Hawaii	64 <sup>th</sup> 2015 New Delhi

## About the author



Dr. Hideo Sawada was formerly Advisor of JBPA (Japan BioPlastics Association). After graduating from Osaka University, he started his career in 1956 with Daicel Chemical Industries, Ltd. in Japan. He has nearly 45 years' experience in the field of polymer science, both in industry and consultancy. His recent interests are concentrated in bioplastics and biodegradable plastics. He is the author of more than 200 publications, including the monograph entitled "Thermodynamics of Polymerization".

He was the convener of ISO/TC61/SC5/WG22 on biodegradability of plastics since its creation in 1993.

In 2006, he received standardization's most prestigious award for his leadership and contribution from Ministry of Economy, Trade and Industry in Japan. He is the 2010 recipient of Outstanding Service Award from ISO/TC61 Plastics. After 22 years with SC5/WG22, he finally retired on 2015-07-16.

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