ROLE OF STANDARDISATION IN SUPPORT OF RESPONSIBLE NANOTECHNOLOGY DEVELOPMENT & COMMERCIALISATION

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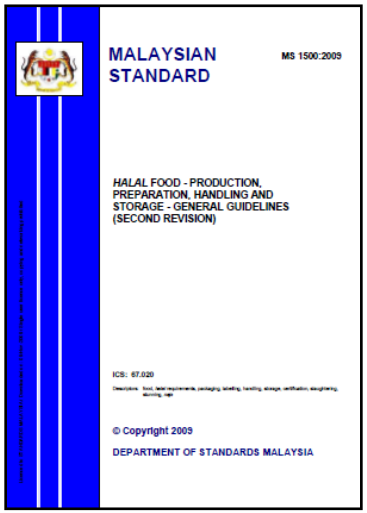
STANDARDS MALAYSIA: ROLES & RESPONSIBILITIES

STANDARDS MALAYSIA – A GOVERNMENT AGENCY UNDER THE MINISTRY OF SCIENCE, TECHNOLOGY & INNOVATION (MOSTI)

STANDARDS MALAYSIA

NATIONAL STANDARDS BODY


MALAYSIAN STANDARD

MS 1500:2009

HALAL FOOD - PRODUCTION, PREPARATION, HANDLING AND STORAGE - GENERAL GUIDELINES (SECOND REVISION)

ICS: 67.020

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DEPARTMENT OF STANDARDS MALAYSIA

Develop and promote Malaysian Standards (MS)

NATIONAL ACCREDITATION BODY

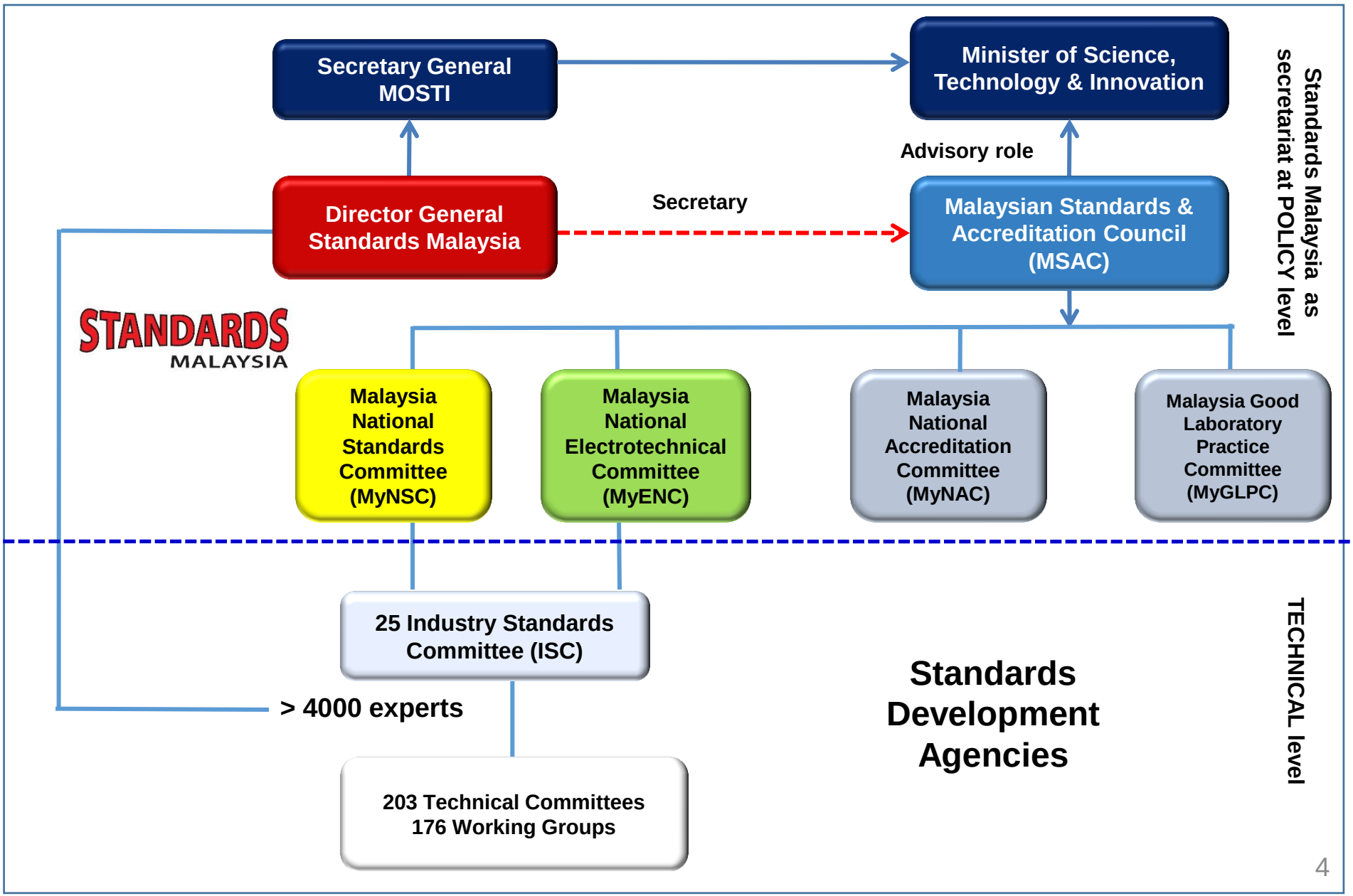
Accredit Conformity Assessment Bodies

Conformity assessment bodies consist of testing & calibration labs, inspection bodies and certification bodies

STANDARDS MALAYSIA ACCREDITED CERTIFICATION BODY

GOVERNED BY STANDARDS OF MALAYSIA ACT 1996

NATIONAL STANDARDISATION INFRASTRUCTURE



MALAYSIAN STANDARDS: DEVELOPMENT

INDUSTRY STANDARDS COMMITTEES (ISC)

- **A** Agriculture
- **B** Chemicals and Materials
- **C** Consumer Interests
- **D** Building, Construction and Civil Engineering
- **E** Generation, Transmission & Distribution of Energy
- **F** Mechanical Engineering
- **G** Information Technology, Communication & Multimedia
- **H** Petroleum & Gas
- **I** Halal Standards
- **J** Plastics and Plastic Products
- **K** Packaging and Logistics
- **L** Transport
- **M** Fire Safety and Prevention
- **N** Rubber and Rubber Products
- **O** Organisational Management
- **P** Metallic Materials & Semi-finished Products
- **Q** Textiles and Apparels
- **R** Medical Devices and Facilities for Healthcare
- **S** Electrical & Electronics Equipments & Accessories
- **T** Tourism, Exhibition & Hospitality Services
- **U** Food and Food Products
- **V** Timber, Timber Structure & Timber products
- **W** Occupational Safety & Health
- **Y** Quality Management & Quality Assurance
- **Z** Environmental Management

18 SIRIM | 1 IKM | 2 STANDARDS USERS | 1 MPMA | 1 STANDARDS MALAYSIA | 1 MTIB | 1 LGM

SDA APPOINTMENT

NO	SDA	DATE OF APPOINTMENT
1.	SIRIM Berhad	12 Jan 2015
2.	Malaysian Timber Industry Board (MTIB)	21 Aug 2013
3.	Institut Kimia Malaysia (IKM)	3 Dec 2013
4.	Malaysian Plastics Manufacturers Association (MPMA)	21 Oct 2014
5.	Malaysian Association of Standards Users (Standards Users)	21 Oct 2014
6.	Lembaga Getah Malaysia (LGM)	22 Jan 2015

Following amendment of Act 549 in year 2012 – appointment of more SDAs

MS DEVELOPMENT PROCESS

Timeline

Request for new MS	ISC approval	Funding & priority-sation	Drafting	Public comment	Review of public comment	ISC approval	Verification	Minister approval

SDA

JSM

MOSTI

ADOPTION (IDT): 4-9 months
INDIGENOUS: 12-18 months

MS STATISTICS (as of 31 March 2017)

ISC	Description	Total MS Developed	Aligned MS	
			IDT	MOD
A	Agriculture	223	43	0
B	**Chemicals and Materials**	**651**	**227**	**46**
C	Consumer Interests	1	0	0
D	Buildings, Construction and Civil Engineering	346	181	18
E	Power Generation, Transmission and Distribution of Energy	438	273	40
F	Mechanical Engineering	263	174	20
G	Information Technology, Communications and Multimedia	203	155	0
H	Petroleum and Gas	210	130	7
I	Halal Standards	21	0	0
J	Plastics and Plastics Products	391	183	23
K	Packaging and Logistics	127	55	0
L	Transport	252	140	9
M	Fire Safety and Prevention	93	33	12

MS STATISTICS (as of 31 March 2017) contd.

ISC	Description	Total MS Developed	Aligned MS	
			IDT	MOD
N	Rubber and Rubber Products	166	91	11
O	Organisational Management	14	9	0
P	Metallic Materials and Semi-Finished Products	246	138	19
Q	Textiles and Apparels	58	38	3
R	Medical Devices and Facilities for Healthcare	326	281	9
S	Electrical and Electronic Equipments and Accessories	364	279	40
T	Tourism, Exhibition and Hospitality Services	13	10	1
U	Food and Food Products	352	75	22
V	Timber, Timber Products and Timber Structure	90	2	10
W	Occupational Safety and Health	227	181	10
Y	Quality Management and Quality Assurance	86	80	2
Z	Environmental Management	107	75	4
	TOTAL	**5268**	**2853**	**306**
% OF ALIGNMENT TO INTERNATIONAL STANDARDS		**60%**		
% IDENTICAL TO INTERNATIONAL STANDARDS		**54%**		

MALAYSIAN STANDARDS: IMPLEMENTATION

MS IMPLEMENTATION

VOLUNTARY USE

4758

STANDARDS MALAYSIA

Develop

MS

Voluntary Implementation

Mandatory Implementation

Industry/ Business/Consumers

* Not all standards can be made mandatory unless it affects safety of consumers, environment & health

MANDATORY USE

510

Relevant Acts of Parliament

Regulatory Body

implement

Supported by

Technical Regulation

a) Compliance/Reference to MS
b) Conformity assessment requirements – testing, inspection & certification
c) Penalty for non-compliance

Complied by

Industry/ Business/Government

NO. OF MANDATORY STANDARDS AS OF 31 MAR. 2017

ISC	No. of mandatory standards
A	52
B	29
D	67
E	89
F	17
H	17
J	34
L	17
M	48
P	27
R	2
S	95
U	13
W	1
Z	2
TOTAL	**510**

BOMBA - Jabatan Bomba dan Penyelamat Malaysia

BKKM - Bahagian Keselamatan dan Kualiti Makanan

CIDB - Lembaga Pembangunan Industri Pembinaan Malaysia

DOSH - Department of Occupational Safety and Health

FAMA - Federal Agricultural Marketing Authority

JAS - Jabatan Alam Sekitar

JKT - Jabatan Kerajaan Tempatan

JPJ - Jabatan Pengangkutan Jalan Malaysia

JPBDSM - Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia

KPDNKK - Kementerian Perdagangan Dalam Negeri Koperasi dan Kepenggunaan

LKM - Lembaga Koko Malaysia

MDA - Medical Device Authority

MPOB - Malaysian Palm Oil Board

ST - Suruhanjaya Tenaga

SPAN - Suruhanjaya Perkhidmatan Air Negara

SKMM - Suruhanjaya Komunikasi Multimedia Malaysia

NANOTECHNOLOGY: INTERNATIONAL LEVEL

ISO/TC 229: NANOTECHNOLOGIES

Secretariat: BSI

Secretary: Mr David Michael

Chairperson (until end 2018): Denis Koltsov

ISO Technical Programme Manager : Mr Antoine Morin

ISO Editorial Programme Manager : Ms Ritsu Hamaoka

Creation date: 2005

Scope

Standardization in the field of nanotechnologies that includes either or both of the following:

- 1. Understanding and control of matter and processes at the nanoscale, typically, but not exclusively, below 100 nanometres in one or more dimensions where the onset of size-dependent phenomena usually enables novel applications,
- 2. Utilizing the properties of nanoscale materials that differ from the properties of individual atoms, molecules, and bulk matter, to create improved materials, devices, and systems that exploit these new properties.

Specific tasks include developing standards for: terminology and nomenclature; metrology and instrumentation, including specifications for reference materials; test methodologies; modelling and simulations; and science-based health, safety, and environmental practices.

55

published ISO standards *

under the direct responsibility of ISO/TC 229

41

ISO standards under development *

under the direct responsibility of ISO/TC 229

37

Participating countries

14

Observing countries

Source: https://www.iso.org/committee/381983.html on 28/04/2017

ISO/TC 229: NANOTECHNOLOGIES

ISO/TC 229 Meetings

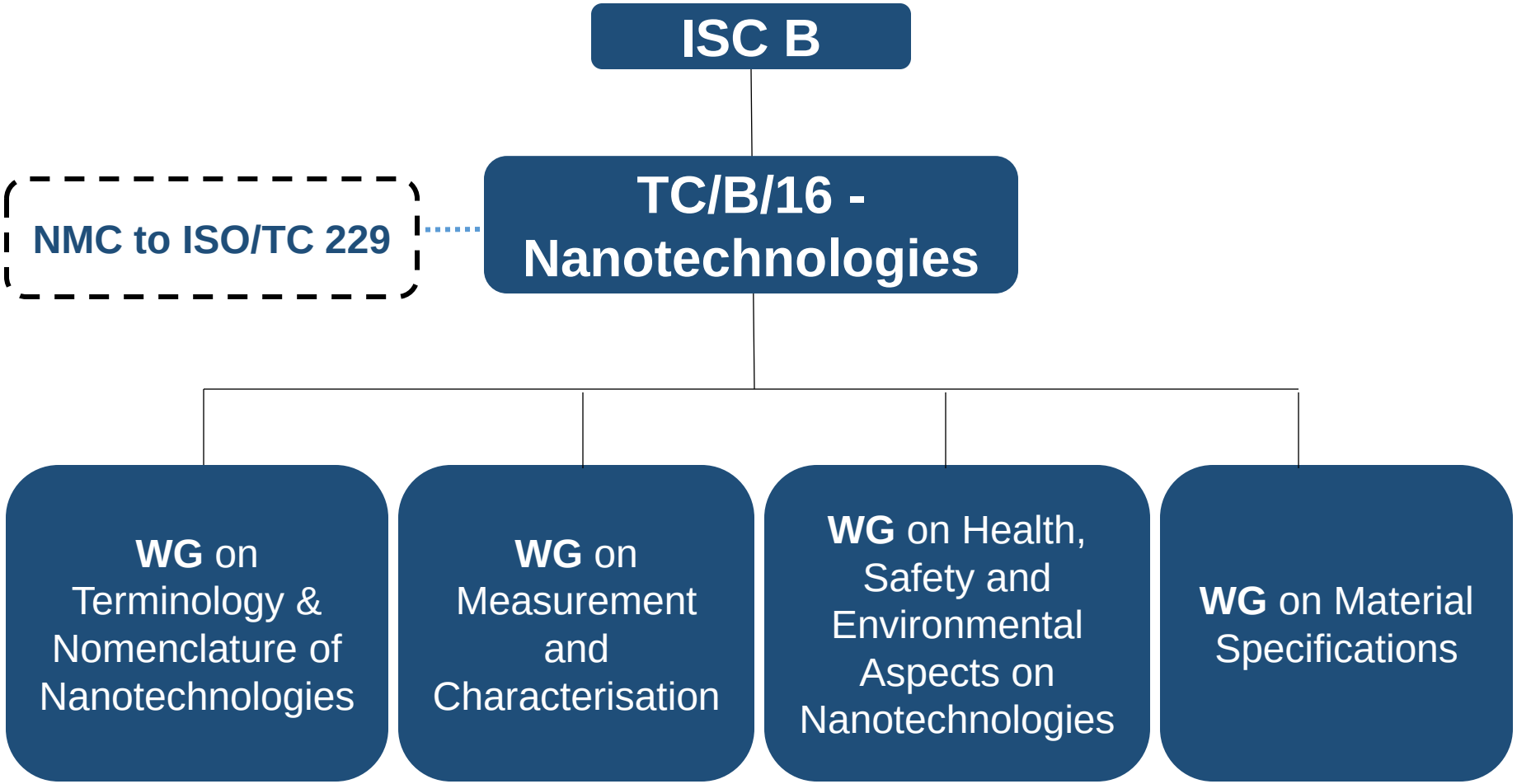
1. **2016 Meeting:** 7 - 11 November 2016 in Singapore (4 experts attended)

2. **2017 Meeting:** 13 - 17 November 2017 in Seoul, Republic of Korea

3. **2018 Meeting:** September 2018 in **Kuala Lumpur** (Sponsored by industry)

NANOTECHNOLOGY: NATIONAL LEVEL

NATIONAL STRUCTURE



Managed by Institut Kimia Malaysia (IKM)

TC/B/16 – NANOTECHNOLOGIES MEMBERSHIP

Member Organisations

1) Department of Environment Malaysia (Hazardous Substances Division)
2) Department of Occupational Safety and Health Malaysia (DOSH)
3) Malaysian Association of Standards Users
4) Malaysian Consumer and Family Economics Association
5) Malaysian Institute of Chemistry (IKM)
6) Malaysian Nuclear Agency (Industrial Technoloy Division
7) Malaysian Nuclear Agency (Radiation Processing Technology Division)
8) Ministry of Science, Technology and Innovation (MOSTI)
9) NanoMalaysia Berhad
10) SIRIM Berhad
11) Universiti of Malaya (Nanotechnology & Catalysis Research Centre)
12) Universiti Putra Malaysia (Dept. of Chemical and Environment Engineering)
13) Universiti Sains Malaysia (School of Chemical Sciences)
14) Universiti Teknologi Malaysia (Faculty of Chemical Engineering)
15) Universiti Teknologi Petronas (Dept. Electrical & Electronic Engineering)

PUBLISHED MS ON NANOTECHNOLOGY

MS ISO/TS 10867:2012
Nanotechnologies – Characterization Of Single-wall Carbon Nanotubes Using Near Infrared Photoluminescence Spectroscopy (ISO/TS 10867:2010, IDT)

MS ISO/TS 11251:2012
Nanotechnologies – Characterization Of Volatile Components In Single-wall Carbon Nanotube Samples Using Evolved Gas Analysis/Gas Chromatography-mass Spectrometry (ISO/TS 11251:2010, IDT)

HOW STANDARDS CAN CONTRIBUTE

STANDARD: ISO DEFINITION

Standard

Document established by consensus *and approved by a* ***recognized body*** *that provides for common and repeated use,* ***rules, guidelines or characteristics for activities or their results*** *aimed at achieving the optimum degree of order in a given context*

NOTE: Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits

Source: ISO/IEC Guide 2:2004, clause 3.2

"We need to encourage governments and authorities across the world to use standards to achieve their aims."

Source: Standards and regulations: how can standards work alongside policies and regulations? Workshop, 7 February 2013 BIS Conference Centre, London
https://www.bsigroup.com/LocalFiles/en-GB/about-bsi/NSB/BSI-policy-report-standards-and-regulations-lr-UK-EN.pdf

TYPES OF MS

Codes of practice

Vocabulary

Guideline

Classification

Specification

Method

REFERENCES TO MS/INTERNATIONAL STANDARDS

Some examples:

1. Act/Technical regulation (if regulated)
2. Testing & calibrations reports from accredited laboratories
3. Definitions
4. Specifications of certain material/product
5. Test methods
6. Certification
7. Safety requirements

COMPLIANCE TO STANDARDS: BENEFITS

Better business, better regulation, better products and services

Helps small and medium-sized businesses

As a roadmap to a better regulation

Safety, quality and value for money for consumers

Source: https://www.iso.org/benefits-of-standards.html

MALAYSIAN STANDARDS (MS): CREDIBILITY

- Consensus document at national level
- Developed by SDA under the Malaysian Standards development system. Public comment is part of transparency process
- Approved by the Minister of Science, Technology and Innovation, in accordance with the Standards of Malaysia Act 1996
- MS Development system is similar at all levels
- Standards Malaysia prescribes to the principles laid by WTO for standards development; the 6 principles
- Various group of stakeholders are consulted & actively participate in the development process
- Refers to the best practices, guidelines & standards as stated by WTO, ISO & IEC
- Developed to suit the requirement & need of the country

6 PRINCIPLES OF MS DEVELOPMENT

EFFECTIVENESS & RELEVANCE

TRANSPARENCY

COHERENCE

OPENNESS

DEVELOPMENT DIMENSION

IMPARTIALITY & CONSENSUS

Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with relation to Articles 2, 5 and Annex 3 of the TBT Agreement

LOOKING FOR AN MS?

www.msonline.gov.my

Thank You

#adastandarduntung