

## Scope of Accreditation for Testing

Certificate No. 20T037/1015

Laboratory Name            Underwriters Laboratories (Thailand) Limited  
 Address                      888 Moo 5, Srinakarin Road, Samrong Nuea, Mueang Samut Prakan, Samut Prakan  
 Accreditation No.        TESTING 0534  
 Laboratory Status         Permanent     Site     Temporary     Mobile

Field of Testing	Specific Test	Test Method
Electrical and electronic field		
1. Household and similar electrical appliances	– Full test except clause 19.11.4.1 to 19.11.4.7, 22.32, 22.46 and Annex R	– TIS 1375-2547 (2004)
2. Household and similar electrical appliances	– Full test except clause 19.11.4.1 to 19.11.4.7, 22.32, 22.46 and Annex R	– IEC 60335-1 Edition 4.0:2001 – IEC 60335-1 Edition 4.1:2004 – IEC 60335-1 Edition 4.2:2006
	– Full test except clause 19.11.4.1 to 19.11.4.8, 22.32, 22.46 and Annex R	– IEC 60335-1 Edition 5.0:2010 – IEC 60335-1 Edition 5.1:2013 – IEC 60335-1 Edition 5.2:2016
3. Clothes washing machines for household use	– Full test except Annex CC	– TIS 1463-2556 (2013)
	– Full test	– TIS 1462-2548 (2005)
	– Full test	– EGAT’s energy efficiency label No.5 program regulations : Washing machine, October B.E. 2562 (2019)
4. Household and similar electrical for washing machines	– Full test except Annex CC	– IEC 60335-2-7 Edition 6.0:2002 – IEC 60335-2-7 Edition 6.1:2004 – IEC 60335-2-7 Edition 6.2:2006 – SNI IEC 60335-2-7:2009

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Electrical and electronic field 4. Household and similar electrical for washing machines (cont.)	<ul style="list-style-type: none"> <li>- Full test except Annex CC</li> <li>- Full test except Annex CC</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- IEC 60335-2-7 Edition 7.0:2008</li> <li>- IEC 60335-2-7 Edition 7.1:2012</li> <li>- IEC 60335-2-7 Edition 7.2:2016</li> <li>- MS 1597-2-7:2017</li> <li>- PNS IEC 60335-2-7:2016</li> <li>- IEC 60335-2-7 Edition 8.0:2019</li> <li>- IEC 60456 Edition 4:2003</li> <li>- IEC 60456 Edition 5:2010</li> <li>- PNS IEC 60456:2013</li> <li>- GSO IEC 60456:2015</li> <li>- UAE.S 5010-2:2013</li> <li>- TCVN 8526:2013</li> <li>- EN 60456:2011</li> <li>- EN 60456:2016</li> <li>- SASO 2885:2018</li> <li>- UAE.S 5010-2:2019</li> <li>- AS/NZS 2040.1:2005</li> <li>- AS/NZS 2040.1:2005+A1:2007</li> <li>- AS/NZS 2040.1:2005+A2:2009</li> <li>- AS/NZS 2040.1:2005+A3:2010</li> <li>- AS/NZS 2040.2:2005</li> <li>- AS/NZS 2040.2:2005+A1:2012</li> </ul>

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Field of Testing	Specific Test	Test Method
Electrical and electronic field		
4. Household and similar electrical for washing machines (cont.)	- Water label	- AS/NZS 6400:2005+A1:2006+A2:2006+A3:2006+A4:2010+A5:2011+A6:2013 - AS/NZS 6400:2016
5. Tumble dryers	- Full test	- TIS 1389-2559 (2016)
6. Household and similar electrical for tumble dryers	- Full test	- IEC 60335-2-11 Edition 7.0:2008 - IEC 60335-2-11 Edition 7.1:2012 - IEC 60335-2-11 Edition 7.2:2015
	- Full test	- IEC 60335-2-11 Edition 8.0:2019
	- Full test	- IEC 61121 Edition 3.1:2005 - IEC 61121 Edition 4.0:2012
	- Full test	- EN 61121:2013 - SASO 2883:2017
7. Household and similar electrical for washer-dryer	- Full test	- IEC 62512 Edition 1.0:2012
	- Full test	- EN 50229:2007 - EN 50229:2015
8. Motor compressors	- Full test except Annex AA	- TIS 812-2558 (2015)

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Electrical and electronic field		
9. Motor compressors	<ul style="list-style-type: none"> <li>- Full test except Annex AA</li> </ul>	<ul style="list-style-type: none"> <li>- IEC 60335-2-34 Edition 4.0:2002</li> <li>- IEC 60335-2-34 Edition 4.2:2009</li> <li>- IEC 60335-2-34 Edition 5.0:2012</li> <li>- IEC 60335-2-34 Edition 5.1:2015</li> </ul>
	<ul style="list-style-type: none"> <li>- Full test except Annex AA, BB, CC</li> </ul>	<ul style="list-style-type: none"> <li>- IEC 60335-2-34 Edition 5.2:2016</li> </ul>
10. Household refrigerators	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- TIS 2214-2548 (2005)</li> </ul>
	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- TIS 2186-2547 (2004)</li> <li>- EGAT's label no.5 program refrigerators, October B.E. 2562</li> </ul>
	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- TIS 455 Part 1-2560 (2017)</li> <li>- TIS 455 Part 2-2560 (2017)</li> <li>- TIS 455 Part 3-2560 (2017)</li> </ul>
11. Household and similar electrical for refrigerating appliances, ice-cream appliances and ice-makers	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- IEC 60335-2-24 Edition 5.0:2000</li> <li>- IEC 60335-2-24 Edition 6.0:2002</li> <li>- IEC 60335-2-24 Edition 6.1:2005</li> <li>- IEC 60335-2-24 Edition 6.2:2007</li> <li>- SNI IEC 60335-2-24:2009</li> </ul>
	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- IEC 60335-2-24 Edition 7.0:2010</li> <li>- IEC 60335-2-24 Edition 7.1:2012</li> <li>- IEC 60335-2-24 Edition 7.2:2017</li> </ul>

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Electrical and electronic field 11. Household and similar electrical for refrigerating appliances, ice-cream appliances and ice-makers (cont.)	<ul style="list-style-type: none"> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Full test</li> <li>- Energy label and MEPS</li> </ul>	<ul style="list-style-type: none"> <li>- PNS IEC 60335-2-24:2013</li> <li>- AS/NZS 60335-2-24:2010+A1:2013</li> <li>- MS 1597-2-24:2005</li> <li>- ISO 8561:1995</li> <li>- ISO 8561:1995+A1:1997</li> <li>- ISO 8187:1991</li> <li>- ISO 8187:1991+A:1997</li> <li>- ISO 7371:1995</li> <li>- ISO 7371:1995+A1:1997</li> <li>- AS/NZS 4474.1:2007+A1:2008+A2:2011</li> <li>- AS/NZS 4474.2:2009+A1:2011+A2:2014</li> <li>- ISO 5155:1995</li> <li>- SASO 2664:2013</li> <li>- IEC 62552 Edition 1.0:2007</li> <li>- EN 62552:2013</li> <li>- SASO 2892:2018</li> <li>- PNS 396-2:1997</li> <li>- PNS 396-2:1997+A1:2000</li> </ul>

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Field of Testing	Specific Test	Test Method
Electrical and electronic field 11. Household and similar electrical for refrigerating appliances, ice-cream appliances and ice-makers (cont.)	<ul style="list-style-type: none"> <li>- Energy label and MEPS</li>   <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- TCVN 7828:2016</li> <li>- UAE.S 5010-3:2013</li> <li>- AS/NZS 4474:2018</li>   <li>- IEC 62552-1:2015</li> <li>- IEC 62552-2:2015</li> <li>- IEC 62552-3:2015</li> <li>- MS IEC 62552-1:2016</li> <li>- MS IEC 62552-2:2016</li> <li>- MS IEC 62552-3:2016</li> <li>- PNS IEC 62552-1:2016</li> <li>- PNS IEC 62552-2:2016</li> <li>- PNS IEC 62552-3:2016</li> <li>- AS/NZS IEC 62552.1:2018</li> <li>- AS/NZS IEC 62552.2:2018</li> <li>- AS/NZS IEC 62552.3:2018</li> <li>- TCVN 7829:2016</li> </ul>
12. Refrigerated display cabinets	<ul style="list-style-type: none"> <li>- Full test</li> </ul>	<ul style="list-style-type: none"> <li>- TIS 1235-2556 (2013)</li> <li>- EGAT's energy efficiency label No.5 program regulations : Refrigerated display cabinets, October B.E. 2562 (2019)</li> </ul>

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Electrical and electronic field 13. Household and similar electrical appliances for commercial refrigerating appliances with an incorporated or remote refrigerant unit or compressor	- Full test	- IEC 60335-2-89 Edition 2.0:2010 - IEC 60335-2-89 Edition 2.1:2012 - IEC 60335-2-89:2010/AMD2:2015	
	- Full test	- IEC 60335-2-89 Edition 3.0:2019	
	- Full test except clause 5.3.6	- ISO 23953-1:2015 - ISO 23953-2:2015 - TCVN 10290:2014	
	- Full test except clause 5.3.6	- EN ISO 23953-2:2015	
	- Full test	- TCVN 10289:2014	
	- Energy label and MEPS	- AS 1731.14:2003 - AS 1731.14:2003+A1:2005 - AS 1731.14-2003+A2:2012	
	14. Air conditioners	- Full test	- TIS 1529-2541 (1998)
		- Full test except clause 5.2	- TIS 1155-2557 (2014)
		- Full test	- TIS 2710-2558 (2015)
		- Full test	- TIS 2711-2558 (2015)
- Full test		- TIS 2712-2558 (2015)	

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		<ul style="list-style-type: none"> <li>- EGAT's energy efficiency label No.5 program regulations : Air conditioners, October B.E. 2562 (2019)</li> </ul>
15. Air conditioners	- Full test	<ul style="list-style-type: none"> <li>- IEC 60335-2-40 Edition 4.0:2002</li> <li>- IEC 60335-2-40 Edition 4.2:2005</li> <li>- MS 1597-2-40:2005</li> <li>- PNS IEC 60335-2-40:2013</li> <li>- SNI IEC 60335-2-40:2009</li> </ul>
	- Full test	<ul style="list-style-type: none"> <li>- IEC 60335-2-40 Edition 5.0:2013</li> <li>- IEC 60335-2-40 Edition 5.1:2016</li> <li>- IEC 60335-2-40 Edition 6.0:2018</li> <li>- MS 1597-2-40:2017</li> <li>- AS/NZS 60335.2.40:2019</li> </ul>
	- Full test	<ul style="list-style-type: none"> <li>- ISO 5151:1994</li> <li>- MS ISO 5151:2004</li> <li>- PNS 240:1998</li> </ul>
	- Full test	<ul style="list-style-type: none"> <li>- ISO 5151:2010</li> <li>- MS ISO 5151:2012</li> <li>- PNS ISO 5151:2014</li> <li>- UAE.S/ISO 5151:2010</li> </ul>



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	- Full test	- ISO 5151:2017
	- Full test	- ISO 13253:1995 - UAE.S/GSO ISO 13253:2009 - GSO ISO 13253:2009
	- Full test	- ISO 13253:2011 - AS/NZS 3823.1.2:2012
	- Full test	- ISO 13253:2017
	- Full test	- ISO 15042:2011 - UAE.S ISO 15042:2011 - AS/NZS 3823.1.4:2012
	- Full test	- ISO 15042:2017
	- Full test	- ISO 16358-1:2013 - ISO 16358-2:2013 - ISO 16358-3:2013

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	- Full test	- ANSI/AHRI 210/240-2008 - AHRI 340/360-2015 - ANSI/ASHRAE 37-2009 - ANSI/AHRI 1230-2010 - ANSI/AHRI 1230-2014
	- Full test	- AS/NZS 3823.1.3:2005 - AS/NZS 3823.2:2013
	- Full test	- EN 14825:2018
	- Full test	- EN 14511-1:2018 - EN 14511-2:2018 - EN 14511-3:2018 - EN 14511-4:2018
	- Energy label and MEPS	- SASO 2663:2018 - SASO 2874:2016 - QS SASO 2663:2015 - UAE.S 5010-1:2016

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Electrical and electronic field 15. Air conditioners (cont.)	- Energy label and MEPS	- UAE.S 5010-5:2016 - AS/NZS 3823.3:2002 - GSO 2530/2016 - PNS 396-1:1998 - QCC-PCS-ASP017.01:2016 - MEW/R6/2017 - REGULATION ON ENERGY LABELLING AND MINIMUM ENERGY PERFORMANCE REQUIREMENTS FOR AIR-CONDITIONERS 2015 - KWS 1893/2018 - SNI 04-6958-2003 - TCVN 7830:2015 - QS 2663/2017
16. Household electrical appliances	- Full test  - Full test	- IEC 62301 Edition 1.0:2005 - IEC 62301 Edition 2.0:2011  - EN 50564:2011

Issue date 2<sup>nd</sup> April B.E. 2563 (2020)

(Signature)

(Mr. Verakit Rantakittanawat)

Deputy Secretary - General

For Secretary - General

Thai Industrial Standards Institute