

# ISO/IEC 16963:2015-03 (E)

## Information technology - Digitally recorded media for information interchange and storage - Test method for the estimation of lifetime of optical disks for long-term data storage

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Conformance .....	1
3	Normative references .....	2
4	Terms and definitions .....	3
5	Conventions and notations .....	4
5.1	Representation of numbers .....	4
5.2	Variables .....	4
5.3	Names .....	4
6	List of acronyms .....	4
7	Measurements .....	5
7.1	Summary .....	5
7.2	Test specimen .....	7
7.3	Recording conditions .....	8
7.4	Playback conditions .....	8
7.5	Disk testing locations .....	9
8	Accelerated stress test .....	9
8.1	General .....	9
8.2	Stress conditions .....	9
8.3	Measuring-time intervals .....	12
8.4	Design of stress conditions .....	12
8.5	Disk orientation .....	13
9	Lifetime estimation .....	13
9.1	Time-to-failure .....	13
9.2	Accelerated-aging test methods .....	14
9.3	Data analysis and judgment of effectiveness .....	14
9.4	Result of estimated disk life .....	15
Annex A (normative) Outline of Disk-life estimation method and data-analysis steps .....		16
Annex B (normative) Disk-life estimation for Controlled storage-condition (Eyring method) .....		24
Annex C (normative) Disk-life estimation for Harsh storage-condition (Arrhenius method) .....		39
Annex D (normative) Alternative non destructive stress condition .....		44
Annex E (informative) Interval estimation for B5 Life using maximum likelihood .....		46
Annex F (informative) RSER measurement of BD disks .....		52
Bibliography .....		53