International Accreditation Forum, Inc.(IAF)

IAF Mandatory Document for the Application of ISO/IEC 17021 in Medical Device Quality Management Systems (ISO 13485)

Issue 1, Version 2

(IAF MD 9:2011)

Issued: 15 July 2011 Application Date : 15 July 2012 IAF MD9:2011 Issue 1, Version 2
Application of ISO/IEC 17021 in ISO 13485

© International Accreditation Forum, Inc. 2011

The International Accreditation Forum, Inc. (IAF) operates programs for the accreditation of bodies that provide conformity assessment services. Such accreditation facilitates trade and reduces demand for multiple certifications.

Accreditation reduces risk for business and its customers by assuring them that accredited Conformity Assessment Bodies (CABs) are competent to carry out the work they undertake within their scope of accreditation. Accreditation Bodies (ABs) which are members of IAF and their accredited CABs are required to comply with appropriate international standards and IAF mandatory documents for the consistent application of those standards.

AB members of the IAF Multilateral Recognition Arrangement (MLA) conduct regular evaluations of each other to assure the equivalence of their accreditation programs. The IAF MLAs operate at two levels:

- The accreditation of CABs to standards including ISO/IEC 17021 for management systems CABs, ISO/IEC 17024 for personnel CABs and ISO/IEC Guide 65 for product CABs, is considered a framework MLA. A framework MLA provides confidence that accredited CABs are equally reliable in the performance of conformity assessment activities.
- The accreditation of CABs that also includes the specific conformity assessment standard or scheme as a scope of accreditation provides confidence in the equivalence of certification.

The IAF MLA delivers the confidence needed for market acceptance of certification. An organization or person with certification to a specific standard or scheme that is accredited by an IAF MLA signatory AB can be recognized worldwide thereby facilitating international trade.

Issue No 1

Prepared by: IAF Technical Committee 26 April 2011

Approved by: IAF Members Date: 3 June 2011

Issue Date: 15 July 2011 Application Date: 15 July 2012

Name for Enquiries: John Owen, IAF Corporate Secretary

Contact: Phone: +612 9481 7343;

Email: secretary1@iaf.nu

© International Accreditation Forum, Inc. 2011

Introduction to IAF Mandatory Documents

The term "should" is used in this document to indicate recognised means of meeting the requirements of the standard. A CAB can meet these in an equivalent way provided this can be demonstrated to an AB. The term "shall" is used in this document to indicate those provisions which, reflecting the requirements of the relevant standard, are mandatory.

© International Accreditation Forum, Inc. 2011

IAF Mandatory Document for the Application of ISO/IEC 17021 in Medical Device Quality Management Systems (ISO 13485)

This document is mandatory for the consistent application of ISO/IEC 17021. All clauses of ISO/IEC 17021 continue to apply and this document does not supersede any of the requirements in that standard. This mandatory document is exclusively for the certification of organization's management system to ISO13485.

0. INTRODUCTION

ISO/IEC 17021 is an International Standard that sets out the general requirements for bodies operating audit and certification of organizations' management systems. If such bodies are to be accredited as complying with ISO/IEC 17021 with the objective of auditing and certifying Medical Device Quality Management System in accordance with ISO 13485, some additional requirements and guidance to ISO/IEC 17021 are necessary.

This document follows the structure of ISO/IEC 17021. IAF specific criteria are identified by the letter" MD" followed with a reference number that incorporates the related requirements clause in ISO/IEC 17021. In all cases a reference in the text of this document to "clause XXX" refers to a clause in ISO/IEC 17021 unless otherwise specified.

1. SCOPE

This document specifies normative criteria for CABs auditing and certifying organization's Quality Management System to ISO 13485, in addition to the requirements contained with ISO/IEC 17021. It is also appropriate as a requirements document for the peer evaluation process for the IAF Multilateral Recognition Arrangement (MLA) among accreditation bodies.

2. NORMATIVE REFERENCES

For the purposes of this document, the normative references given in ISO/IEC 17021 and the following apply. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 17021 Conformity Assessment - Requirements for bodies providing audit and certification of management systems

ISO 13485 Medical devices – Quality management systems – Requirements for regulatory purposes

ISO/TR 14969:2004 Medical devices — Quality management systems — Guidance on the application of ISO 13485:2003

© International Accreditation Forum, Inc. 2011

ISO 14971:2007, Medical devices — Application of risk management to medical devices

The following GHTF documents should be considered for use.

GHTF/SG4/N28R4:2008 Guidelines for Regulatory Auditing of Quality Management Systems of Medical Device Manufacturers – Part 1: General Requirements

GHTF/SG4/N30R20:2006 Guidelines for Regulatory Auditing of Quality Management Systems of Medical Device Manufacturers – Part 2: Regulatory Auditing Strategy

GHTF/SG4/N33R16:2007 Guidelines for Regulatory Auditing of Quality Management Systems of Medical Device Manufacturers – Part 3: Regulatory Audit Reports

GHTF/SG4 (00) 3:2000 Training Requirements for Auditors (Guidelines for Regulatory Auditing of Quality Systems of Medical Device Manufacturers - Part 1: General Requirements - Supplement 2)

GHTF/SG4/N83:2010 Guidelines for Regulatory Auditing of Quality Management System of Medical Device Manufactures – Part 4: Multiple Site Auditing

GHTF/SG4/N84:2010 Guidelines for Regulatory Auditing of Quality Management System of Medical Device Manufactures – Part 5: Audits of Manufacturer Control of Suppliers

GHTF/SG1-N29R16:2005, Information Document Concerning the Definition of the Term "Medical Device"

GHTF/SG1-N15:2006, Principles of Medical Devices Classification

IAF MD5 Duration of QMS and EMS Audits

3. TERMS AND DEFINITIONS

For the purpose of this document, the terms and definitions given in ISO/IEC 17021, ISO 13485 and the following apply.

Regulatory Authority (RA)

A government agency or other entity that exercises a legal right to control the use or sale of medical devices within its jurisdiction, and may take enforcement action to ensure that medical devices marketed within its jurisdiction comply with legal requirements.

Note: Within the European Medical Devices Regulation the Regulatory Authority as defined above is titled “Competent Authority”.

4. PRINCIPLES

4.1 General

© International Accreditation Forum, Inc. 2011

No additional principles for ISO 13485.

4.2 Impartiality

No additional principles for ISO 13485.

4.3 Competence

No additional principles for ISO 13485.

4.4 Responsibility

MD.4.4.1

ISO 13485 requires the organization to comply with the statutory and regulatory requirements applicable to the safety and performance of the medical devices.

The maintenance and evaluation of legal compliance is the responsibility of the client organization. The CAB is responsible for verifying that the client organization has evaluated statutory and regulatory compliance and can show that appropriate action has been taken in cases of non-compliance with relevant legislation and regulations, including the notification to the Regulatory Authority of any incidences that require reporting.

4.5 Openness

MD.4.5.1

In order to increase the confidence from interested parties and specifically regulators that accept or take into consideration ISO 13485 accredited certification for the purpose of their recognitions, it is expected that CBs establish appropriate agreements with their clients to release audit report information to regulators that recognize ISO 13485.

4.6 Confidentiality

No additional principles for ISO 13485.

4.7 Responsiveness to complaints

No additional principles for ISO 13485.

5. GENERL REQUIREMENTS

5.1 Legal and contractual matters

© International Accreditation Forum, Inc. 2011

5.1.1 Legal responsibility

No additional requirements for ISO 13485.

5.1.2 Certification agreement

No additional requirements for ISO 13485.

5.1.3 Responsibility for certification decisions

No additional requirements for ISO 13485.

5.2 Management of impartiality

MD 5.2

The CAB and its auditors shall be impartial and free from engagements and influences which could affect their objectivity, and in particular shall not be:

a) involved in the design, manufacture, construction, marketing, installation, servicing or supply of the medical device
b) involved in the design, construction, implementation or maintenance of the quality management system being audited
c) an authorized representative of the client organization, nor represent the parties engaged in these activities

The situations hereafter are examples where impartiality is compromised in reference to the criteria defined in a) to c):

i. the auditor having a financial interest in the client organization being audited (e.g. holding stock in the organization)
ii. the auditor being employed currently by a manufacturer producing medical devices
iii. the auditor being a member of staff from a research or medical institute or a consultant having a commercial contract or equivalent interest with the manufacturer or manufacturers of similar medical devices.

NOTE Allowing a minimum period of two years to elapse following the end of the relationship is one way of reducing the threat to impartiality to an acceptable level.

5.3 Liability and financing

No additional requirements for ISO 13485.

6. STRUCTURAL REQUIREMENTS

6.1 Organization structure and top management

No additional requirements for ISO 13485.

© International Accreditation Forum, Inc. 2011

6.2 Committee for safeguarding impartiality

MD 6.2.3

The committee for safeguarding impartiality shall have access to individual(s) who have experience and knowledge related to medical devices in order to get expert opinions.

7. RESOURCE REQUIREMENTS

7.1 Competence of management and personnel

MD 7.1.1 Management and personnel competence

Where ISO/IEC 17021 Clause 7.1.1 refers to (as relevant for the specific certification scheme) for ISO 13485, this should be understood to mean, medical devices and applicable legal requirements.

All management and personnel involved in ISO 13485 certification shall meet the competency requirements of Annex B.

7.2 Personnel involved in the certification activities

MD 7.2.1 Auditor

Each auditor shall have demonstrated competency as defined in Annex C.

The CAB shall identify authorizations of its auditors/technical experts using the Technical Areas in Tables in Annex A.

MD 7.2.4 Auditor experience

For a first authorization, the auditor shall comply with the following criteria, which shall be demonstrated in audits under guidance and supervision:

a) have gained experience in the entire process of auditing medical devices' quality management system, including review of documentation and risk management of medical devices, implementation audit and audit reporting. This experience shall have been gained by participation as a trainee in a minimum of four audits for a total of at least 20 days in an accredited QMS program, 50% of which shall be against ISO 13485 preferably in an accredited program, and the rest in an accredited QMS program;

In addition to criteria a), audit team leaders shall fulfil the following:

b) have experienced an audit team leader role under the supervision of a qualified team leader at least three ISO 13485 audits.

MD 7.2.9 Personnel making the certification decision

© International Accreditation Forum, Inc. 2011

The CAB shall ensure that personnel (group or individual) making the certification decision fulfil the competence in Annex B. This does not mean that each individual in the group needs to comply with all requirements, but the group as a whole shall meet the all the requirements. When the certification decision is made by an individual, the individual shall meet all the requirements.

7.3 Use of individual external auditors and external technical experts

No additional requirements for ISO 13485.

7.4 Personnel records

No additional requirements for ISO 13485.

7.5 Out sourcing

No additional requirements for ISO 13485.

8. INFORMATION REQUIREMENTS

8.1 Publicly accessible information

MD 8.1.3

Where it is required by law, the CAB shall provide the information about certifications granted, suspended or withdrawn to relevant Regulatory Authority.

8.2 Certification documents

MD 8.2.1

The CAB shall precisely document the scope of certification. The CAB shall not exclude part of processes, products or services (unless allowed by regulatory authorities) from the scope of certification when those processes, products or services have an influence on the safety and quality of products.

8.3 Directory of certified clients

No additional requirements for ISO 13485.

8.4 Reference to certification and use of marks

No additional requirements for ISO 13485.

8.5 Confidentiality

© International Accreditation Forum, Inc. 2011

No additional requirements for ISO 13485.

8.6 Information exchange between a certification body and its clients

8.6.1 Information on the certification activity and requirements

No additional requirements for ISO 13485.

8.6.2 Notice of changes by a certification body

No additional requirements for ISO 13485.

8.6.3 Notice of changes by a client

No additional requirements for ISO 13485.

9. PROCESS REQUIREMENTS

9.1 General requirements

MD 9.1.3.2

The audit team shall have the competency for the Technical Area (Annex A) for the scope of audit.

MD 9.1.4.1 Determining audit time

The requirements from IAF Mandatory document MD5 (Duration of QMS and EMS Audit) apply except those for EMS and the table QMS 1. The Annex D, table D.1 replaces table QMS 1 and provides a starting point for estimating the duration of an initial audit (Stage 1 + Stage 2) for ISO 13485 certification.

Audit duration is dependent on factors such as the audit scope, objectives and specific regulatory requirements to be audited, as well on the range, class and complexity of medical devices, and the size and complexity of the organization. When CABs are planning audits, sufficient time shall be allowed for the audit team to determine the conformity status of the client organization's quality management system with respect to the relevant regulatory requirements. Any additional time required to audit national or regional regulatory requirements and dossier reviews must be justified.

Audit duration for all types of audits includes on site time at a client's premises and time spent off-site carrying out planning, document review, interacting with client personnel and report writing. It does not consider the time required for design dossier reviews, type examinations, pre-market approval audits and other similar activities. The audit duration should be adjusted to take into account the factors listed in Annex D which may increase or decrease the estimated

© International Accreditation Forum, Inc. 2011

audit time.

MD 9.1.5 Multi-site sampling

Design and development and manufacturing sites cannot be sampled.

MD 9.1.9.6 Identifying and recording audit findings

Examples of nonconformities are as follows:

a) failure to address applicable requirements for quality management systems (e.g. failure to have a complaint handling or training system)
b) failure to implement applicable requirements for quality management systems
c) failure to implement appropriate corrective and preventative action when an investigation of post market data indicates a pattern of product defects
d) products which are put onto the market and cause undue risk to patient and/or users when the device is used according to the product labelling
e) the existence of products which clearly do not comply with the client's specifications and/or the regulatory requirements
f) repeated nonconformities from previous audits
g) an excessive number of any other nonconformities than ones shown in b) of 9.1.15 of ISO/IEC 17021 against a particular requirement for quality management systems

9.2 Initial audit and certification

9.2.1 Application

No additional requirements for ISO 13485.

9.2.2 Application review

No additional requirements for ISO 13485.

9.2.3 Initial certification audit

MD 9.2.3

When a certification body has audited a client against a regulatory scheme that includes or goes beyond the requirements of ISO 13485, it does not need to repeat the audit for conformity with the elements of ISO 13485 previously covered, providing the certification body can demonstrate that all of the requirements of this document have been complied with.

Note: Typical regulatory schemes that include or go beyond the requirements of ISO13485 are European Medical Device Directives:

- Medical Device Directive (MDD)

© International Accreditation Forum, Inc. 2011

- In -Vitro Diagnostic Devices Directive (IVD)
- Active Implantable Medical Devices Directive (AIMD)

Other jurisdictions include:

- Canada – Health Canada, Canadian Medical Devices Conformity Assessment System (CMDCAS)
- Australia – Therapeutic Goods Administration, Therapeutic Goods Regulations

Additionally other countries are adopting or considering adopting ISO 13485 into their Medical Device Regulations.

9.2.3.1 Stage 1 audit

MD 9.2.3.1

Where higher risk medical devices are concerned, the stage 1 audit should be performed on-site.

9.2.3.2 Stage 2 audit

No additional requirements for ISO 13485.

9.2.4 Initial certification audit conclusions

No additional requirements for ISO 13485.

9.2.5 Information for granting initial certification

No additional requirements for ISO 13485.

9.3 Surveillance activities

9.3.1 General

No additional requirements for ISO 13485.

9.3.2 Surveillance audit

MD 9.3.2.1

In addition to requirements of Clause 9.3.2.1, the surveillance programme shall include a review of actions taken for notification of adverse events, advisory notices, and recalls.

9.3.3 Maintaining certification

© International Accreditation Forum, Inc. 2011

No additional requirements for ISO 13485.

9.4 Recertification

9.4.1 Recertification audit planning

No additional requirements for ISO 13485.

9.4.2 Recertification audit

No additional requirements for ISO 13485.

9.4.3 Information for granting recertification

No additional requirements for ISO 13485.

9.5 Special audits

9.5.1 Extension to scope

No additional requirements for ISO 13485.

9.5.2 Short-notice audits

MD 9.5.2

Short notice audits may be required when:

a) external factors apply such as:
   i) available post-market surveillance data known to the CAB on the subject devices indicate a possible significant deficiency in the quality management system
   ii) significant safety related information becoming known to the CAB
b) significant changes occur which have been submitted as required by the regulations or become known to the CAB, and which could affect the decision on the client's state of compliance with the regulatory requirements

The following are examples of such changes which could be significant and relevant to the CAB when considering that a special audit is required, although none of these changes should automatically trigger a special audit:

i) QMS – impact and changes:
   - New ownership
   - Extension to manufacturing and/or design control
   - New facility, site change
     * Modification of the site operation involved in the manufacturing activity (e.g. relocation of the manufacturing operation to a new site or centralizing the design and/or development functions for several manufacturing sites)

© International Accreditation Forum, Inc. 2011

- New processes, process changes
  - Significant modifications to special processes (e.g. change in production from sterilization through a supplier to an on site facility or a change in the method of sterilization)
- QM management, personnel
  - Modifications to the defined authority of the management representative that impact
    - quality management system effectiveness or regulatory compliance
    - the capability and authority to assure that only safe and effective medical devices are released

ii) Product related changes:
- New products, categories
- Addition of a new device category to the manufacturing scope within the quality management system (e.g. addition of sterile single use dialysis sets to an existing scope limited to haemodialysis equipment, or the addition of magnetic resonance imaging to an existing scope limited to ultrasound equipment)

iii) QMS & Product related changes:
- Changes in standards, regulations
- Post market surveillance, vigilance

An unannounced or short-notice audit may also be necessary if the CAB has justifiable concerns about implementation of corrective actions or compliance with standard and regulatory requirements.

9.6 Suspending, withdrawing or reducing the scope of certification

No additional requirements for ISO 13485.

9.7 Appeals

No additional requirements for ISO 13485.

9.8 Complaints

No additional requirements for ISO 13485.

9.9 Records of applicants and clients

No additional requirements for ISO 13485.

10. MANAGEMENT SYSTEM REQUIREMENTS FOR CERTIFICATION BODIES

10.1 Options

© International Accreditation Forum, Inc. 2011

10.2 Option 1: Management system requirements in accordance with ISO 9001

10.2.1 General

No additional requirements for ISO 13485.

10.2.2 Scope

No additional requirements for ISO 13485.

10.2.3 Customer focus

No additional requirements for ISO 13485.

10.2.4 Management review

No additional requirements for ISO 13485.

10.2.5 Design and development

No additional requirements for ISO 13485.

10.3 Option 2: General management requirements

10.3.1 General

No additional requirements for ISO 13485.

10.3.2 Management system manual

No additional requirements for ISO 13485.

10.3.3 Control of documents

No additional requirements for ISO 13485.

10.3.4 Control of records

No additional requirements for ISO 13485.

10.3.5 Management review

10.3.5.1 General

No additional requirements for ISO 13485.

10.3.5.2 Review inputs

© International Accreditation Forum, Inc. 2011

No additional requirements for ISO 13485.

10.3.5.3 Review outputs

No additional requirements for ISO 13485.

10.3.6 Internal audits

No additional requirements for ISO 13485.

10.3.7 Corrective actions

No additional requirements for ISO 13485.

10.3.8 Preventive actions

No additional requirements for ISO 13485.

© International Accreditation Forum, Inc. 2011

Annex A

(Normative)
Medical Devices Technical Areas

The CAB shall use the Technical Areas described in the tables of this Annex
a) to help define the scope of certification,
b) to identify if any technical qualification, including competence in sterilization processes of its auditors is necessary for that particular technical area and
c) to select a suitably qualified audit team.

When using technical areas other than specified in the tables, the technical areas shall be detailed.

Table A.1.1 - NON-ACTIVE MEDICAL DEVICES

Main Technical Areas	Technical Areas	Product Categories Covered by the Technical Areas
Non-active Medical Devices	**General non-active, non-implantable medical devices**	• Non-active devices for anesthesia, emergency and intensive care • Non-active devices for injection, infusion, transfusion and dialysis • Non-active orthopedic and rehabilitation devices • Non-active medical devices with measuring function • Non-active ophthalmologic devices • Non-active instruments • Contraceptive medical devices • Non-active medical devices for disinfecting, cleaning, rinsing • Non-active devices for in vitro fertilisation (IVF) and assisted reproductive technologies (ART)
	Non-active implants	• Non-active cardiovascular implants • Non-active orthopedic implants • Non-active functional implants • Non-active soft tissue implants
	Devices for wound care	• Bandages and wound dressings • Suture material and clamps • Other medical devices for wound care

© International Accreditation Forum, Inc. 2011

	Non-active dental devices and accessories	• Non-active dental devices/equipment and instruments • Dental materials • Dental implants
	Non-active medical devices other than specified above	

© International Accreditation Forum, Inc. 2011

Table A.1.2 - ACTIVE (NON-IMPLANTABLE) MEDICAL DEVICES

Main Technical Areas	Technical Areas	Product Categories Covered by the Technical Areas
Active Medical Devices (Non-Implantable)	**General active medical devices**	• Devices for extra-corporal circulation, infusion and haemopheresis • Respiratory devices, devices including hyperbaric chambers for oxygen therapy, inhalation anaesthesia • Devices for stimulation or inhibition • Active surgical devices • Active ophthalmologic devices • Active dental devices • Active devices for disinfection and sterilisation • Active rehabilitation devices and active prostheses • Active devices for patient positioning and transport • Active devices for in vitro fertilisation (IVF) and assisted reproductive technologies (ART) • Software
	Devices for imaging	• Devices utilizing ionizing rays • Devices utilizing non-ionizing rays
	Monitoring devices	• Monitoring devices of non-vital physiological parameters • Monitoring devices of vital physiological parameters
	Devices for radiation therapy and thermo therapy	• Devices utilising ionizing radiation • Devices utilising non-ionizing radiation • Devices for hyperthermia / hypothermia • Devices for (extracorporal) shock-wave therapy (lithotripsy)
	Active (non-implantable) medical devices other than specified above	

© International Accreditation Forum, Inc. 2011

Table A.1.3 - ACTIVE IMPLANTABLE MEDICAL DEVICES

Main Technical Areas	Technical Areas	Product Categories Covered by the Technical Areas
Active Implantable Medical Devices	**General active implantable medical devices**	• Active implantable medical devices for stimulation / inhibition • Active implantable medical devices delivering drugs or other substances • Active implantable medical devices substituting or replacing organ functions
	Implantable medical devices other than specified above	

Table A.1.4 - IN VITRO DIAGNOSTIC MEDICAL DEVICES

Main Technical Areas	Technical Areas	Product Categories Covered by the Technical Areas
In Vitro Diagnostic Medical Devices (IVD)	**Reagents and reagent products, calibrators and control materials for:** **Clinical Chemistry** **Immunochemistry (Immunology)** **Haematology/Haemostasis/Immunohematology** **Microbiology** **Infectious Immunology** **Histology/Cytology** **Genetic Testing**	
	In Vitro Diagnostic Instruments and software	
	IVD medical devices other than specified above	

Table A.1.5 – STERILIZATION METHODS FOR MEDICAL DEVICES

Main Technical Areas	Technical Areas	Product Categories Covered by the Technical Areas
Sterilization Method for Medical Devices	**Ethylene oxide gas sterilization (EOG)**	
	Moist heat	
	Aseptic processing	

© International Accreditation Forum, Inc. 2011

	Radiation sterilization (e.g. gamma, x-ray, electron beam)	
	Sterilization method other than specified above	

Table A1.6 – DEVICES INCORPORATING / UTILIZING SPECIFIC SUBSTANCES / TECHNOLOGIES

Main Technical Areas	**Technical Areas**	**Product Categories Covered by the Technical Areas**
Devices incorporating/utilizing specific substances/ technologies	**Medical devices incorporating medicinal substances**	
	Medical devices utilizing tissues of animal origin	
	Medical devices incorporating derivates of human blood	
	Medical devices utilizing micromechanics	
	Medical devices utilizing nanomaterials	
	Medical devices utilizing biological active coatings and/or materials or being wholly or mainly absorbed	

© International Accreditation Forum, Inc. 2011

Annex B.
(Normative)
Required types of knowledge and skills for personnel involved with the ISO 13485 activities

The following table specifies the type of knowledge and skills that a CAB shall define for specific functions.

Table B.1 – Table of knowledge and skills

Certification functions / **knowledge and skills**	Personnel conducting the application review to determine audit team competence required, to select the audit team members, and to determine the audit duration	Personnel reviewing audit reports and making certification decisions	Auditor	Expert in Technical Area (Annex A)	Personnel managing program
Knowledge of generic quality management system practices	x	x	x		x
Knowledge of specific management system standards, e.g. ISO 13485, GHTF documents. etc.	x	x	x		x
Knowledge of legal framework of regulations and role of the CAB	x	x	x		x
Knowledge of medical device risk management, e.g. ISO 14971	x	x	x		x
Knowledge of intended use of medical devices				x	
Knowledge of risks associated with the medical device				x	
Knowledge of relevant product standards in the assessment of medical devices				x	
Knowledge of CAB's IISO 13485 processes	x	x	x		x
Knowledge of business management practices			x		
Knowledge of Medical Device business/technology	x	x	x	x	x
Knowledge of client products, processes and organization	x	x	x	x	x

© International Accreditation Forum, Inc. 2011

Language skills appropriate to all levels within the client organization			x		
Note-taking and report writing skills			x		
Presentation skills			x		
Interviewing skills			x		
Audit-management skills			x (team leader)		

© International Accreditation Forum, Inc. 2011

Annex C
(Normative)
Auditor qualification, training and experience

C.1 Education

The CAB shall ensure that auditors have the knowledge corresponding to post-secondary education or equivalent work experience. Appropriate professional areas are listed below as examples:

a) biology or microbiology;
b) chemistry or biochemistry;
c) computer and software technology;
d) electrical, electronic, mechanical or bioengineering;
e) human physiology;
f) medicine;
g) pharmacy;
h) physics or biophysics.

C.2 Work Experience

The CAB shall ensure that auditors have adequate experience to perform their tasks. In general, auditors shall have a minimum of four years of full-time work experience in medical device related industry, including at least two years of work experience in one or more of the following:

a) closely related industries and the workplace such as research and development, manufacturing;
b) the application of the device technology and its use in health care services and with patients;
c) testing the devices concerned for compliance with the relevant national or international standards;
d) conducting performance testing, evaluation studies or clinical trials of the devices.

Exceptionally, shorter duration of experience or experience in areas other than above listed may be considered as appropriate. In such cases, the CAB shall demonstrate that the experience of the auditor is equivalent and shall record the justification for the acceptance.

C.3 Auditor Competency

See Annex B.

C.4 Development and maintenance of competency

C.4.1 Continuous Professional Development (CPD)

© International Accreditation Forum, Inc. 2011

Each auditor shall undertake CPD activities such as training, participation in scientific meetings, and self-study. Such activities should ensure timely awareness of new or modified regulatory requirements, policies, procedures, etc., as well as emerging technologies. Training in emerging technologies may be provided through co-operation with manufacturers developing or using the concepts. Knowledge is also gained from experience in enforcing regulatory requirements, implementing procedures, and applying policies and interpretations.

It is recognised that medical device manufacturing constitutes a highly specialised, technology driven and fast evolving sector. Additionally, new regulatory requirements, standards, policies, and procedures are introduced, and existing ones are modified from time to time. Therefore, the CAB shall ensure maintenance of the knowledge and skills of the auditors appropriate to cover the scope of audits of organizations, through appropriate and timely training and encouraging CPD.

C.4.2 Advanced training elements for auditors

As auditors gain competence in conducting audits, advanced and specialised training is recommended. The auditor's needs, weaknesses, and desires for career development may influence specific advanced training courses selected by an auditor. Subjects suggested for advanced training include:

a) Risk management, including risk analysis;
b) Process validation;
c) Sterilisation and related processes;
d) Electronics manufacture;
e) Plastics manufacturing processes;
f) Development and validation of software or hardware for devices and manufacturing processes;
g) In-depth knowledge of specific medical devices and/or technologies.

© International Accreditation Forum, Inc. 2011

Annex D
(Normative)

Table D.1
Relationship between effective number of personnel and audit duration (Initial Audit only)

Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)	Effective Number of Personnel	Audit Duration Stage 1 + Stage 2 (days)
1-5	3	**626-875**	15
6-10	4	**876-1175**	16
11-15	4.5	**1176-1550**	17
16-25	5	**1551-2025**	18
26-45	6	**2026-2675**	19
46-65	7	**2676-3450**	20
66-85	8	**3451-4350**	21
86-125	10	**4351-5450**	22
126-175	11	**5451-6800**	23
176-275	12	**6801-8500**	24
276-425	13	**8501-10700**	25
426-625	14	**>10700**	Follow progression above

Factors used to determine the audit time

a) Factors which may increase the audit duration
 i) Number of ranges and/or complexity of medical devices.
 ii) Manufacturers using suppliers to supply processes or parts that are critical to the function of the medical device and/or the safety of the user or finished products, including own label products. When the manufacturer cannot provide sufficient evidence for conformity with audit criteria, then additional time may be allowed for each supplier to be audited.
 iii) Manufacturers who install product on customer's premises.
 Note: Time may be required for customer site visits or installation records review
 iv) Poor regulatory compliance by the manufacturer

b) Factors that may reduce the audit duration
 i) Reduction of the manufacturer product range since last audit
 ii) Reduction of the design/or production process since last audit

© International Accreditation Forum, Inc. 2011

End of IAF Mandatory Document for the Application of ISO/IEC 17021 in Medical Device Quality Management Systems (ISO 13485).

Further Information

For further Information on this document or other IAF documents, contact any member of IAF or the IAF Secretariat.

For contact details of members of IAF see - IAF Web Site - <http://www.iaf.nu>

Secretariat -

John Owen,

IAF Corporate Secretary,

Telephone +612 9481 7343

email <secretary1@iaf.nu>

© International Accreditation Forum, Inc. 2011