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NATIONAL EVALUATION CENTER
OF QUALITY & TECHNOLOGY
IN HEALTH S.A.

TECHNICAL FILE OF MEDICAL DEVICES

REGULATION/REQUIREMENTS

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1. Introduction

The technical file is developed by the manufacturer and must include sufficient information on the adopted dispositions so as to ensure the conformity of the device to the requirements throughout all the phases from design to final release. The technical file provides the objective proof that the essential requirements of legislation are met.

2. Contents of the Technical File

The technical file should at least include the following:

1. General description of the device
2. Description of the possible variations of the device
3. Intended use(s) of the device
4. Product classification
5. List of the applied standards
6. Evidence that the essential requirements are met
7. Design data
8. Manufacturing process data
9. Risk Analysis and results
10. Clinical evaluation
11. The results of the risk analysis
12. Clinical evaluation
13. Label and instructions for use
14. Draft of the declaration of conformity to be issued by the manufacturer

3. Technical File Structure

The technical file must contain the following information:

1. Contents with the following layout

α/α	Title	pg.
1	General information	
2	Evidence that the essential requirements are met	

2. the general information needed for the production of the device, by filling in the form provided in Appendix 1
3. evidence that the essential requirements are met by filling in a table similar to the one provided in Appendix 2 or with a more analytical imprinting. The table is filled in either by reference to specific pages of the documentation or by direct response. All the essential requirements must be filled in (it is mentioned whenever it is not necessary).
4. all the elements referred to in point 3 “Contents of Technical File”.

Appendix C provides general directions on how to fill in the technical file.

4. Specific requirements

i. The pages of the technical file must be numbered. Technical files shall be submitted in electronic file, as well.

ii. Reports of tests conducted by others on behalf of the manufacturer are accepted when original (or certified copies) and issued by: university laboratories, accredited test laboratories or certified test laboratories.

iii. Reports of tests conducted abroad will be accompanied by a certified translation in Greek or in English language.

5. Modifications

The present modification concerns: 1. the restructuring of the contents of Point 2: Contents of the technical file. 2. The amendment of the point 4 Specific requirements 3. The addition of supplementary data in Annex C, and 4. The amendment of footnote in Annex D

APPENDIX A

GENERAL INFORMATION

GENERAL INFORMATION

Device Name :

Device class : Is ☐ Im ☐ IIa ☐ IIb ☐ III ☐

Applied classification rules:

Manufacturer

trade name:
address:
address of the production unit:
tel.:
fax:
email:
website:

Authorised Representative (wherever required):

trade name:
address:
tel.:
fax:
email:
website:

Publication:
(if not the first publication, fill in table 1)

Date of application:

Person in charge

name:
position:
contact number:
email:

Table 1: REVISIONS OF THE TECHNICAL DOCUMENT

Date	page(s)	justification

the table is filled in for each revision

Table 2: MAJOR SUBCONTRACTORS

process	subcontractor
	Trade name: Address: tel.: fax: email: website: Person in charge: Position: Contact number: email:

the table must be filled in for each process carried out by subcontractors

In case of manufacturing of the device (as a whole) from a crucial subcontractor, all the relevant to the device data, as described in the next pages of this Regulation, should be incorporated in the technical file for evaluation.

APPENDIX B

QUESTIONNAIRE ON MEETING ESSENTIAL REQUIREMENTS

ARTICLE	REQUIREMENT	EVIDENCE
1	SECURITY & HEALTH OF THE PATIENT, USERS AND THIRD PARTIES	
2	INCORPORATION OF SECURITY IN DESIGNING AND MANUFACTURING	
	SAFETY PRECAUTIONS & RISK NOTIFICATIONS	
	INFORM USERS FOR POTENTIAL RISKS	
3	ACHIVIEMENT OF PREDICTED PERFORMANCES DURING EXECUTION OF PREDICTED FUNCTIONS	
4	MAINTENANCE OF CHARACTERISTICS & PEROFRMANCES DURING USE IN NORMAL CONDITIONS	
5	MAINTENANCE OF CHARACTERISTICS & FUNCTION PERFOMANCES AFTER STORAGE &TRANSPORTATION ACCORDING TO THE MANUFACTURER INSTRUCTIONS FOR USE	
6	SIDE EFFECTS ARE NOT AN UNACCEPTABLE RISK IN RELEVANCE TO THE PREDICTED PERFORMANCE	
6.α	CLINICAL ASSESSMENT	
7.1	TOXICITY & FLAMMABILITY	
	COMPATIBILITY WITH BIOLOGICAL TISSUES, CELLS & BODY FLUIDS	
	RESULTS OF BIOPHYSICAL REASEARCHES OR STANDARDIZATION	
7.2	RISK OF INFECTIOUS AGENTS & RESIDENTS FOR STOREMEN, USERS & PATIENTS	
7.3	SAFETY DURING USE WITH THE DEVICES, SUBSTANCES, GASES & DRUGS IT COMES IN CONTACT WITH	
7.4	INCORPORATION EFFICIENCY OF THE DRUG & OBSERVATION OF THE RELEVANT LEGISLATION	
	EXISTENCE OF A SCIENTIFIC OPINION FOR A DRUG	
	SCIENTIFIC OPINION OF EMEA WHEN PART OF THE DEVICE IS DERIVATIVE OF THE HUMAN BLOOD	
	OPINION OF COMPETENT AUTHORITY ON THE DRUG	
7.5	SAFETY FROM SUBSTANCES DISCHARGED BY THE DEVICE	
	EXISTENCE OF PHTHALATES	
	USE OF PHTHALATES BY CHILDREN, PREGNANT WOMEN, BREASTFEEDING MOTHERS	

ARTICLE	REQUIREMENT	EVIDENCE
7.6	PROTECTION AGAINST UNINTENTIONAL INGRESS OF SUBSTANCES DURING USE	
8.1	PROTECTION AGAINST RISKS OF INFECTION FOR THE PATIENT, THE USERS & THIRD PARTIES	
8.2	INFORMATION FOR TISSUES OF ANIMAL ORIGIN	
8.3	MAINTENANCE OF STERILIZATION	
8.4	SUITABILITY & VALIDITY OF STERILIZATION METHOD	
8.5	MANUFACTURING CONDITIONS OF DEVICES TO BE STERILIZED	
8.6	SUITABILITY OF PACKAGING SYSTEM FOR STERILIZED DEVICES	
8.7	DISTINCTION BETWEEN STERILIZED AND NON STERILIZED DEVICES	
9.1	MAINTENANCE OF SAFETY & PERFORMANCE OF THE DEVICE WHEN COMBINED WITH OTHER DEVICES AS PREDICTED	
9.2	RISK CONTROL OF PHYSICAL INJURY FROM THE NATURAL CHARACTERISTICS OF THE DEVICE	
	RISK CONTROL FROM PREDICTABLE ENVIRONMENTAL CONDITIONS	
	RISK CONTROL FROM MUTUAL INTERACTION WITH OTHER DEVICES	
	RISK CONTROL FROM FAILURE OF MAINTAINANCE OR ADJUSTMENT, FROM AGEING OF MATERIALS OR DIMINUATION OF CALCULATION OR CONTROL DEVICE ACCURACY	
9.3	RISK CONTROL OF FIRE & IGNITION DURING PREDICTED USE	
10.1	ACCURACY AND STABILITY OF PROVIDED DEVICE MEASUREMENTS	
10.2	CONTROL & IMAGING MEASUREMENTS SCALES ERGONOMICS	

ARTICLE	REQUIREMENT	EVIDENCE
10.3	LEGITIMATE MEASUREMENT UNIT (DIRECTIVE 80/181/EEC)	
11.1.1	EXPOSURE OF PATIENTS, USERS AND THIRD PARTIES TO RADIATION CONFORMS WITH THE INTENDED USE	
11.2.1	ABILITY OF THE USER TO CONTROL EMISSION OF INTENDED RADIATION	
11.2.2	EXISTENCE OF OPTICAL AND/OR ACOUSTIC INDICATORS OF EMISSION OF DANGEROUS INTENDED RADIATION	
11.3.1	CONTROL OF EXPOSURE OF PATIENTS, USERS & THIRD PARTIES TO UNINTENDED RADIATION	
11.4.1	REQUIRED INFORMATION ON INSTRUCTIONS FOR USE OF RADIATION EMITTING DEVICES	
11.5.1	ADJUSTMENT & CONTROL OF EMITTED IONISING RADIATION	
11.5.2	EXPOSURE OF THE PATIENT & THE USER TO IONISING RADIATION FOR DIAGNOSTIC RADIATION IN RELEVANCE TO IMAGING QUALITY OR/AND OUTGOING SIGNAL	
11.5.3	MONITORING & CONTROL OF PROVIDED IONISING RADIATION FOR THERAPEUTIC RADIOLOGY	
12.1	REPEATABILITY, RELIABILITY, EFFECTIVENESS & REDUCTION OF RISKS IN CASE OF DAMAGE FOR INTEGRATED ELECTRONIC PROGRAMMABLE SYSTEMS	
12.1.α	CERTIFICATION OF INCORPORATED SOFTWARE	
12.2	EXISTENCE OF INSTRUMENT TO MONITOR INTERNAL ENERGY SOURCE	
12.3	EXISTENCE OF ALARM SYSTEM FOR THE FADING OF EXTERNAL ENERGY SOURCE	
12.4	EXISTENCE OF ALARM SYSTEMS FOR DEVICES THAT MONITOR FUNCTIONS OF CRITICAL IMPORTANCE FOR THE PATIENT	

ARTICLE	REQUIREMENT	EVIDENCE
12.5	RISK CONTROL OF CREATION OF ELECTROMAGNETIC FIELDS	
12.6	RISK CONTROL OF ACCIDENTAL ELECTROSHOCK DURING NORMAL USE AND IN THE EVENT OF DAMAGE	
12.7.1	PATIENT & USER PROTECTION	
12.7.2	PATIENT & USER PROTECTION AGAINST VIBRATIONS	
12.7.3	PATIENT & USER PROTECTION AGAINST NOISE	
12.7.4	RISK CONTROL OF TERMINALS & CONNECTION LAYOUTS	
12.7.5	RISK CONTROL FROM TEMPERATURE IN ACCESSIBLE PARTS OF THE DEVICE & THEIR ENVIRONMENT	
12.8.1	ADJUSTMENT & MAINTENANCE OF POWER SUPPLY OR/AND SUBSTANCES WITH SUFFICIENT ACCURACY	
12.8.2	RISK CONTROL OF ABNORMALITIES IN POWER OR SUBSTANCES SUPPLY	
	EXISTENCE OF A SYSTEM IN ORDER TO AVOID THE SUPPLY OF HAZARDOUS POWER LEVELS OR/AND SUBSTANCES	
12.9	DISPLAY ON THE DEVICE OF THE FUNCTION OF THE OPERATING INSTRUMENTS & INDICATORS	
	COHERENT INFORMATION ON INSTRUCTIONS OF USE	
13.1	COMPLETENESS OF INFORMATION ON LABEL, INSTRUCTIONS & PACKAGING	
13.2	SUITABILITY OF INFORMATION SYMBOLS	

ARTICLE	REQUIREMENT		DOCUMENTATION
13.3	LABEL INFORMATION	A) TRADE NAME & ADDRESS OF MANUFACTURER AND AUTHORISED REPRESENTATIVE	
		B) NECESSARY INFORMATION ON THE DEVICE	
		C) INDICATION “STERILIZED”	
		D) LOT OR S/N	
		E) EXPIRATION DATE	
		F) INDICATION “SINGLE USE”	
		G) INDICATION “CUSTOM-MADE DEVICE”	
		H) INDICATION “EXCLUSIVELY FOR MEDICAL REASEARCHES”	
		I) SPECIAL CONDITIONS OF STORAGE OR/AND HANDLING	
		J) SPECIAL INSTRUCTIONS FOR USE	
		K) WARNINGS &NECESSARY PRECAUTIONS	
		L) YEAR OF MANUFACTURING OF ACTIVE DEVICES EXCEPT FOR E)	
		M) STERILIZATION METHOD	
		N) INDICATION OF INTEGRAL INCORPORATION OF DERIVATIVE HUMAN BLOOD	
13.4	PREDICTED DESTINATION OF THE DEVICE		
13.5	EXISTENCE OF IDENTIFICATION ELEMENTS FOR THE DEVICES & THE EXTRACTABLE PARTS		
13.6	INFORMATION OF INSTRUCTIONS OF USE	a) 13.3 EXCEPT FOR D) & E)	
		b) PERFORMANCE AND SIDE EFFECTS	
		c) DETAILS ON SAFE INSTALLATION & COMBINATION WITH OTHER DEVICES	
		d) DETAILS ON PROPER INSTALLATION & NECESSARY HANDLING & SETTING DUTIES	
		e) IMPLANTATION RISKS	
		f) MUTUAL INTERFERENCE RISKS	
		g) DISTRUCTION OF STERILISED PACKAGING & POSSIBLE NEW STERILIZATION	
		h) FOR REUSABLE DEVICES, ISSUES RELATED TO CLEANING, DECONTAMINATION, RESTERILIZATION FOR SINGLE USE DEVICES RISKS OF REUSE	
		i) ADDITTIONAL PROCESSING & HANDLNG BEFORE USE	
		j) ELEMENTS OF EMITTED RADIATION	
		k) PRECAUTIONS AGAINST ALTERATION OF PERFORMANCE OF THE DEVICE	
		l) PRECAUTIONS AGAINST EXPOSURE TO NON USUAL CONDITIONS	
		m) PROVIDED MEDICINAL DEVICE & INTERACTIONS	
		n) PRECAUTIONS AGAINST REJECTION OF THE DEVICE	
		o) PHARMACEUTICAL SUBSTANCES & DERIVATIVES OF HUMAN BLOOD	
		p) APPROPRIATE ACCURACY GRADE OF MEASUREMENT LAYOUTS	
		q) LAST REVISION DATE OF INSTRUCTIONS FOR USE	

APPENDIX C

GENERAL RECOMMENDATIONS ON THE COMPLETION OF THE TECHNICAL FILE

1. **General description of the device**

A brief description is needed sufficient to understand the design, characteristics and performance of the product and a description of the packaging where this is related to the preservation of product characteristics and performance. Wherever appropriate, a general representation of the product with images such as a diagram, photograph or design can be submitted

2. **Description of the possible intended variations of the device**

The possible variations of the medical device (for instance, catheters of a specific type that differ only in terms of dimensions), shall be stated and adequately described. The characteristics and the discrimination between the variations shall be clearly stated

3. **Intended use(s)**

A brief description of the purpose or/and the method of use of the device is necessary. It may include, depending on the situation, details on the patients and the medical condition(s) the device is intended for. It must be clear which users it is destined for, particularly if the device is for professional use. Information may derive from the general description of the device, the instructions for use or the user manual of the device. It is not necessary to provide details on the mechanism of the device which enables carrying out its purpose.

4. **Classification of the device**

In case it is not evident, the manufacturer must provide written evidence on the reasons for the characterization of the device as a medical device and designate which other requirements apply wherever relevant.

The technical file must include the rule(s) applied for the classification of the device in the framework of the directive 93/42/EEC (ΚΥΑ ΔΥ8δ/Γ.Π.οικ.130648), along with a brief justification for this classification. Also, if not apparent, it should be mentioned why some rules are not applied.

Guidance is provided in document MEDDEV 2. 4/1 *Classification of medical devices*

5. List of the applied standards

A list of the standards applied in full or in part and description of the solutions that have been adopted to meet the essential requirements, in case the harmonized standards have not been applied in full, shall be documented

6. Evidence that the essential requirements are met

When considered that some Essential Requirements do not apply for the device under assessment, and this is not apparent, a brief justification must be provided. The manufacturer must demonstrate how each one of the applicable essential requirements has been met, as well as every implied technical requirement / specification for the particular device. Conformity with the current harmonized standards constitutes proof of conformity with the relevant essential requirements. Where "harmonized standards" are used as a proof of conformity with the relevant essential requirements, all that is needed is to prove that the device conforms with the relevant requirements of the harmonized standards. If conformity is declared based on standards under publication, the manufacturer must keep track of the possible variations of these standards. If the device does not conform with the current relevant standards, appropriate justification must be provided.

Conformity with the current standards is voluntary. In case other methods are used, the manufacturer must demonstrate that:

a) the methods applied sufficiently meet the essential requirements, and
b) the device conforms with the relevant essential requirements

Proof of conformity with the standards may derive from test reports or it can be demonstrated through the application of standard operation procedures (SOP) and corresponding evidence.

The adopted solutions and how these meet the relevant requirements must be presented using a control table like the one in Appendix B. The table should imprint:

a) the essential requirements, identifying those that apply/do not apply
b) the list of standards applied
c) the way of conformity with each essential requirement, either by immediate reference to the adopted solution or by reference to specifications, reports etc. When the proof of conformity with specific essential requirements is effected through conformity with currently applied standards, they should be specified.

7. Design Data

The manufacturer must determine the characteristics and performance needed to ensure the proper and safe function of the device. For instance, a relevant characteristic may be the ensuring of the sterility of the catheter, while a relevant performance, the ability of the protective packaging to maintain the sterility of the catheter when subject to stress during transportation and storage. The manufacturer must define those specifications that are appropriate and adequate for the product under assessment, to ensure and preserve the foreseeable characteristics and performance of the product for the intended use, eg construction drawings, component, sub-assembly, circuit, first materials etc

Thus, depending on the type of the medical device under assessment the technical file shall include evidence on:

• identification of the physical, chemical and biological properties of the medical device

• specifications of raw materials and packaging materials, as well as the relevant MSDS and CoA of the materials selected.

• drawings, diagrams of the main components and of the basic subcomponents,

• Mechanical / electrical drawings of components and sub-assemblies (for active products)

• determination of all the physical and chemical tests applied to the product for its safety, performance and effectiveness (in-process and final testing) and of the utilized standards/methodologies, of the test criteria, acceptance criteria etc

• the stability of the product for the stated duration (stability study and test results)

• data for in vivo testing: Studies in animal models (objectives, methodology, results, analysis and conclusions)

• Radiation protection and electrical safety

• Accuracy and stability of measurements for products with metering function

• others

Especially:

For the devices that are placed on the market sterilized, the requirements are specified in the harmonized standards of the series EN 556 and EN ISO 14937. There also apply the harmonized standards of the series EN 868 for packaging and, depending on the method, specific standards for the development, validation and routine control of the process (EN ISO 17665 for sterilization by moist heat, EN ISO 11135 for ethylene oxide sterilization, EN ISO 11137 for radiation sterilization, etc). For biological and chemical indicators, standards EN ISO 14161, 11138, 11140 and 18472 are applied

The technical file should include the validation report of the sterilization process as well as the revalidation plan

For the devices which have impeded software or which constitute medical software themselves the technical file shall include the relevant software validation report.

The stand alone software is considered as an active medical device. The software that guides a medical device or affects its use falls automatically in the same class with the device.

Relevant guidance is provided in document MEDDEV 2.1/6 Guidelines on the qualification and classification of stand alone software used in healthcare within the regulatory framework of medical devices.

When a device is to be connected to another device (s) in order to function as intended, proof must be provided that the product in question complies with the relevant essential requirements when it is attached to the other device (s) which have the characteristics specified by the manufacturer

For products that incorporate a medicinal substance with supplementary action, the aforementioned supplementary action shall be documented in relation to the intended use of the product

Relevant guidance is provided in document MEDDEV 2.1 / 3 part B

Biological evaluation

The technical file shall include a biological evaluation report, justifying the controls performed on the product (EN ISO 10993-1), the results of the tests demonstrating the suitability, safety and biocompatibility and a general biological assessment conclusion

In particular, the documentation provided must contain:

• A list of all materials which are in direct or indirect contact with the patient or the user, including the concentration of the materials and the indication of the particle size.

• Biocompatibility test reports, based on the justified audit plan (EN ISO 10993-1)

• evaluation of the results with regard to the suitability and safety of the product

• Bio-stability data (e.g., coating stability, etc.)

• others

For products coming into contact with the body, the series of the harmonized standards EN ISO 10993 is applied.

For products with particles below 100 nm, data should be provided for: agglomeration, chemical composition and structure, particle size distribution, purity, solubility, coating characteristics

8. Manufacturing Process

The technical file must provide a general overview (eg flow chart) of the manufacture method, sterilization or other specific processes applied, assembly, packaging/labelling, and final product checks, including a complete batch record for the validation of the design.

The protocols for the tests, which should include the parameters to be measured, the measurement and testing equipment used and the acceptance criteria, as well as the results of the in-process and final testing of the test production, sterility tests, etc. shall be provided.

The manufacturer shall determine which specifications, designs, diagrams etc are suitable and sufficient for the proper installation, maintenance, repair of the device, in order to ensure and maintain the intended characteristics and performance, where appropriate

In addition, data on production conditions, clean room validation etc. (EN ISO 14644, EN ISO 14698), shall be included, where appropriate

9. Results of risk analysis

The manufacturer must present documented results of risk analysis.
Risk analysis must cover all the known or predictable risks for the specific type of device, in combination with the possibility of appearance and the severity of the consequences and the measures taken for the reduction of risks in acceptable levels.

In the case of single use devices, the risk analysis should consider the reuse as a possible risk, as an example of expected misuse.
The manufacturer must provide evidence that the appropriate risk analysis has been performed and that the remaining risks are acceptable in terms of the predicted profits for the patient.

The materials used for the manufacture of the device must be determined in the technical file, as well as the biological safety and the biocompatibility of the materials that are destined to come in contact with the human body, particularly those that will come in prolonged contact.
For the risk analysis the harmonized standard EN ISO 14971 is applied.

For devices that come in contact with the human body, the series of harmonized standards EN ISO 10993 is applied.

10. Clinical evaluation

Clinical evidence includes data from the marketing experience from similar devices, prospective clinical studies and information from scientific bibliography.

Scientific bibliography often concerns other medical devices than the ones evaluated. The manufacturer must, therefore, demonstrate to what extent the scientific bibliography relates to his device. The results of laboratory tests can be used to prove the relation between the device under evaluation and the device covered by the scientific bibliography and as a result their equivalence.

For the clinical investigations the harmonized standards EN ISO 14155-1 & -2 are applied.

Guidance for the clinical investigation and the assessment of clinical data is provided in documents MEDDEV. 2.7/4 Guidelines on clinical investigation
MEDDEV. 2.7/1 Clinical evaluation
MEDDEV 2.12/2 Post market clinical follow-up studies

11.Labeling and instructions for use

The label and most likely, the instructions for use shall be included in the technical file.

It must be clear where each information will be provided: for instance on the device itself, on the individual packaging or the trade packaging, on the instruction leaflet or the device user manual. The instructions for use must bear the date of last revision and the conformity marking CE.

The information may be provided either as a text or by use of symbols.

The current relevant harmonized standards are EN 1041 and EN 15223-1.

For devices that can be re-sterilized , EN ISO 17664 is applied.

Some technical standards may demand specialized information.

12.Declaration of conformity

A plan of declaration of conformity issued by the manufacturer for the certified devices is required. The declaration must have a clear reference to directive 93/42/EOK and to the particular Appendix according to which the manufacturer is certified. It must include all the necessary elements required by the currently applied legislation.

Useful information is provided in standard EN ISO 17050-1.

Indicative sample is provided in Appendix D.

APPENDIX D

DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY [Example]

according to Appendix ……of Directive 93/42/EOK

Declaration Number	
Manufacturer	
Address	
Device	
Classification	
Classification rules	

We hereby declare that the devices that this declaration concerns, are in conformity with the requirements of Directive 93/42/EEC and the Ministerial Decision of harmonization of national legislation, ΔΥ8δ/Γ.Π.οικ.130648.

The conformity of the applicable system for quality has been certified by the National Evaluation Center of Quality and Technology in Health, ΕΚΑΡΤΥ, Notified body, with identification number 0653.

The present declaration is issued based on certificate ……. (No. of certificate) valid until……(certificate expiration date) and replaces every previous declaration issued for this device.

Signature : Date:

*This declaration should cover one medical device **clearly defined** by reference of the name, the code or any other undeniable data of reference of the device. The approved variations of the device can be mentioned in an attached Annex*