



强制检定证书

MANDATORY VERIFICATION CERTIFICATE

证书编号 YLZ202403124
Certificate No.

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送检单位 连州市人民医院
Client

送检单位地址 连州市洋湄路5号
Add. of Client

计量器具名称 医用血管造影X射线机
Description

型号/规格 Optima IGS 330
Model/Type

制造厂 GE
Manufacturer

出厂编号 DV5SS1800122HL 设备管理编号
Serial No. Equipment No.

检定依据 JJG1067-2011 医用诊断数字减影血管造管造影(DSA)系统X射线辐射源检定规程
Regulation

检定结论 合格
Conclusion Qualified

检定日期 2024 年 02 月 28 日
Date of Verification Y M D

依据检定规程, 被检仪器检定周期不超过 壹 年
The verification period is within 1 year(s)

批准人 吴国光 吴国光
Approved Signatory

核验员 李奇 李奇
Reviewed by

检定员 陈上文 陈上文
Verified by

检定专用章
Stamp



扫一扫查真伪



说 明

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DIRECTIONS

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1. 本中心是国家市场监督管理总局在华南地区设立的国家法定计量检定机构, 计量授权证书号是: (国) 法计 (2022) 01043号、(国) 法计 (2022) 01032号。本中心质量管理体系符合JJF1069-2012《法定计量检定机构考核规范》的要求。

This laboratory is the National Legal Metrological Verification Institution in southern China set up by the State Administration for Market Regulation under authorization certificates No.(2022)01043 & (2022)01032. The quality system is in accordance with JJF1069-2012 Rules for the Examination of the Service of Legal Metrological Verification.

2. 本中心所出具的数据均可溯源至国家计量基准和国际单位制(SI)。

All data issued by this laboratory are traceable to national primary standards and International System of Units (SI).

3. 检定地点、环境条件:

Place and environmental conditions of the verification:

地点 委托方介入室	温度 21.0 °C	相对湿度 60 %
Place	Temperature	R.H.

4. 本次检定所使用的主要计量标准器具:

Major standards of measurement used in the verification:

设备名称/型号规格/测量范围	编号	证书号/有效期/溯源单位	计量特性
Name of Equipment	Serial No.	Certificate No./Due Date	Metrological
/Model/Type/Range		/Traceability to	Characteristic
X射线机多功能质量检测仪 Dosimetric Instruments for X-Ray	CB2-15040191	DLj12023-07073 /2024-05-29 /国家计量院	$U_{rel}=3.2\% (k=2)$
分辨率测试卡 Resolution Test Card	LP-04	CJC202310587 /2024-06-12 /本中心	MPE: $\pm 10\%$
DSA性能检测模块 DSA Performance Detection Module	25062723	DLj12023-12656 /2024-09-19 /国家计量院	模拟血管直径: $U=0.12 \text{ mm}$ ($k=2$), 模拟血管厚 度: $U=0.12 \text{ mm}$ ($k=2$) Simulated vessel diameter: $U=0.12 \text{ mm}$ ($k=2$), Simulated vessel thickness: $U=0.12 \text{ mm}$ ($k=2$)
/DSA-8 Plus/模拟血管直 径: 1.00mm~4.00mm, 模拟血管 厚度: (0.5~1.5) cm			

注: 1. 本证书检定结果只与受检定仪器有关。The results relate only to the items verified.
2. 未经本机构书面批准, 不得部分复制此证书。This certificate shall not be reproduced except in full, without the written approval of our laboratory.
3. “委托方”、“委托方联络信息”由委托方提供, “制造厂”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注, 委托方对上面内容如有异议, 须在收到证书后二十个工作日内提出。
The information **Client** and **Contact Information** are provided by client, and the **Manufacturer**, **Model/Type**, **Serial No.** and **Equipment No.** are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.
4. 本次检定日期视为发布日期。The verification date is the date of issue of the certificate.



检定结果 RESULTS OF VERIFICATION

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原始记录号 YLZ202403124
Record No.

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1. 外观: 合格
Appearance: Pass

2. 模拟血管最小分辨尺寸:
Minimu Dimension of simulative Blood Vessel

减影后能看到模体中直径为1 mm的模拟血管, 同时能分辨造影剂浓度为150 mg/cm³直径2 mm的模拟血管上1/2宽度的畸变模拟血管。

3. 空间分辨力: 16 Lp/cm
Spacial Resolution

4. 低对比度分辨力:
Low Contrast Resolution

可均匀分辨碘浓度为5 mg/cm³, 直径为2 mm的模拟血管。

5. 减影性能影响:
Substraction Characteristic Effect

减影后加骨骼模块能分辨浓度为150 mg/cm³, 直径为2 mm的模拟血管。

6. X射线管的电压: +4.7%
X-ray Tube Voltage

[技术要求: ±10%]
Technical Requirements

说明:

Note:

1. 测量结果的扩展不确定度: 管电压: $U_{rel}=3.0\%$ ($k=2$)。

Expanded uncertainty of measurement results.

2. 本证书中给出的扩展不确定度依据 JJF1059.1-2012《测量不确定度评定与表示》评定, 由合成标准不确定度乘以包含概率约为95%时对应的包含因子 k 得到。

The expanded uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", which is obtained by multiplying the combined standard uncertainty by the coverage factor k corresponding to the coverage probability of about 95%.