Data Article

Biomechanics data of human supra-aortic trunks and abdominal visceral arteries harvested during autopsy

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Supra-aortic trunks
Renal arteries
Superior mesenteric artery
Celiac trunk
Autopsy

Abstract

The present dataset describes the biomechanical properties of the supra-aortic trunks (brachiocephalic trunk, left common carotid artery, and left subclavian artery) and some of the visceral branches of the abdominal aorta (celiac trunk, superior mesenteric artery, and renal arteries). The specimens have been harvested from 27 adult donors during the autopsy procedure. The vessels were submitted to uniaxial biomechanical tensile tests, and values of failure stress, failure tension, and failure strain were obtained. As atherosclerosis could affect any of those vessels producing a significant reduction in their lumen, the data presented here could be of great interest to vascular surgeons, interventional cardiologists, and interventional neuroradiologists, who manipulate these arteries endovascularly. The observations gathered here are experimental evidence of the vessels’ endurance against tearing and of their deformability. Therefore this data article could also help the medical industry dedicated to the production of endovascular devices. This dataset is related to the

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article entitled “Left Common Carotid Artery Biomechanical Properties in Individuals over 80 years: Women Have Stiffer Vessels” published in Annals of Vascular Surgery in August 2020 [1].

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### Specifications Table

| Subject                         | Cardiovascular Medicine                                      |
|---------------------------------|---------------------------------------------------------------|
| Specific subject area           | Vascular surgery; Vascular biomechanics                      |
| Type of data                    | Table                                                         |
|                                 | Graph                                                         |
| How data were acquired          | - Biomechanic uniaxial tensile test                          |
|                                 | - Instruments: Biomechanic tensile test equipment             |
|                                 | - Make and model of the instruments used:                    |
|                                 | ' INSTRON SPEC 2200 / INSPEC software                        |
| Data format                     | Raw                                                           |
| Parameters for data collection  | The cadaveric specimens were randomly harvested.             |
| Description of data collection  | During autopsy procedure, the whole aorta (thoracic and abdominal parts) was harvested along with its main branches (brachiocephalic trunk, left common carotid artery, left subclavian artery, celiac trunk, superior mesenteric artery and renal arteries). These branches were carefully dissected and collected for biomechanical analysis through uniaxial tensile test, which evaluated the following variables: failure stress, failure tension, and failure strain. |
| Data source location            | **Institution:** University of São Paulo School of Medicine  |
|                                 | **City/Region:** São Paulo, São Paulo, Southeast region       |
|                                 | **Country:** Brazil                                           |
|                                 | **Latitude and longitude for collected samples/data:** 23°33′20.7″S 46°40′13.0″W |
| Primary data sources            | **Institution:** University of São Paulo School of Medicine  |
|                                 | **City/Region:** São Paulo, São Paulo, Southeast region       |
|                                 | **Country:** Brazil                                           |
|                                 | **Latitude and longitude for collected samples/data:** 23°33′20.7″S 46°40′13.0″W |
| Data accessibility              | **Repository name:** Dataset on biomechanics of human supra-aortic trunks and abdominal visceral arteries harvested during autopsy [2] |
|                                 | **Data identification number:** 10.17632/v9v6ck223r.1         |
|                                 | **Direct URL to data:** https://doi.org/10.17632/v9v6ck223r.1 |
| Related research article        | V.C. Gomes, L.F. da Silva, S.P. Zygier, et al., Left Common Carotid Artery Biomechanical Properties in Individuals over 80 years: Women Have Stiffer Vessels, Ann. Vasc. Surg. 67 (2020) 461–467.1 |
|                                 | [https://doi.org/10.1016/j.avsg.2020.01.107]                 |

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### Value of the Data

- The present data are experimental information regarding the biomechanical behavior of supra-aortic trunks and visceral arteries. Considering that some of those arteries are frequently manipulated during endovascular procedures, it is of great relevance knowing their resistance against tearing and compliance.
- As these arteries are manipulated during endovascular procedures, their biomechanical behavior could be precious information, especially to vascular surgeons, interventional neuro-radiologists as well as to interventional cardiologists.
- The present data could be especially useful for the development of new endovascular materials, like stents and catheters, used in the supra-aortic trunks and visceral arteries.
• The knowledge of the biomechanical properties of the abovementioned arteries could better instruct the professionals and industry that deal with this vessels, aiming safer surgical procedures and high quality endovascular devices.

1. Data Description

| File name                  | File Description                                                                 |
|---------------------------|----------------------------------------------------------------------------------|
| CASE1aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram    |
|                           | related to this uniaxial tensile test. The elastic diagram (stress-strain curve) |
|                           | is built with force and elongation information until the sample rupture.         |
| CASE1aret Specimen 1 Data | Biomechanical test of left renal artery - excel file related to the chart: this   |
| File.xls                  | excel file contains precisely all the information that enabled the creation of    |
|                           | the chart related to this sample. It comprises critical data such as displacement  |
|                           | observed during the tensile test (mm), the load applied (N), strain (deformation), |
|                           | tension (N/cm), and stress (N/m2).                                              |
| CASE1aret.TXT              | Biomechanical test of left renal artery - biomechanical test report: the        |
|                           | biomechanical test device produces a report detailing the experiments’          |
|                           | conditions, such as temperature and humidity, as well as the width and          |
|                           | thickness of the sample.                                                        |

CASE 2

| File name                  | File Description                                                                 |
|---------------------------|----------------------------------------------------------------------------------|
| CASE2acet Curve Fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic  |
|                           | diagram related to this uniaxial tensile test. The elastic diagram (stress-strain |
|                           | curve) is built with force and elongation information until the sample rupture.  |
| CASE2acet Specimen 1 Data | Biomechanical test of left common carotid artery - excel file related to the chart: |
| File.xls                  | this excel file contains precisely all the information that enabled the creation of |
|                           | the chart related to this sample. It comprises critical data such as displacement  |
|                           | observed during the tensile test (mm), the load applied (N), strain (deformation), |
|                           | tension (N/cm), and stress (N/m2).                                              |
| CASE2acet.TXT              | Biomechanical test of left common carotid artery - biomechanical test report:     |
|                           | the biomechanical test device produces a report detailing the experiments’        |
|                           | conditions, such as temperature and humidity, as well as the width and thickness  |
|                           | of the sample.                                                                  |
| CASE2aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram    |
|                           | related to this uniaxial tensile test. The elastic diagram (stress-strain curve) |
|                           | is built with force and elongation information until the sample rupture.         |
| CASE2aret Specimen 1 Data | Biomechanical test of left renal artery - excel file related to the chart: this   |
| File.xls                  | excel file contains precisely all the information that enabled the creation of    |
|                           | the chart related to this sample. It comprises critical data such as displacement  |
|                           | observed during the tensile test (mm), the load applied (N), strain (deformation), |
|                           | tension (N/cm), and stress (N/m2).                                              |
| CASE2aret.TXT              | Biomechanical test of left renal artery - biomechanical test report: the        |
|                           | biomechanical test device produces a report detailing the experiments’          |
|                           | conditions, such as temperature and humidity, as well as the width and          |
|                           | thickness of the sample.                                                        |
| CASE2ascet Curve Fitted.jpg| Biomechanical test of left subclavian artery – chart represents the elastic      |
|                           | diagram related to this uniaxial tensile test. The elastic diagram (stress-strain |
|                           | curve) is built with force and elongation information until the sample rupture.  |
| CASE2ascet Specimen 1 Data| Biomechanical test of left subclavian artery - excel file related to the chart:   |
| File.xls                  | this excel file contains precisely all the information that enabled the creation of|
|                           | the chart related to this sample. It comprises critical data such as displacement |
|                           | observed during the tensile test (mm), the load applied (N), strain (deformation), |
|                           | tension (N/cm), and stress (N/m2).                                              |
| CASE2ascet.TXT             | Biomechanical test of left subclavian artery - biomechanical test report:        |
|                           | the biomechanical test device produces a report detailing the experiments’       |
|                           | conditions, such as temperature and humidity, as well as the width and          |
|                           | thickness of the sample.                                                        |

(continued on next page)
| FILE NAME                                   | DESCRIPTION                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------------|
| CASE2tbc Curve Fitted.jpg                  | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE2tbc Specimen 1 Data File.xls          | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE2tbc.TXT                               | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE3accet Curve Fitted.jpg                | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE3accet Specimen 1 Data File.xls        | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE3accet.TXT                             | Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE3amst Curve Fitted.jpg                 | Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE3amst Specimen 1 Data File.xls         | Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE3amst.TXT                              | Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE3aret Curve Fitted.jpg                 | Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE3aret Specimen 1 Data File.xls         | Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE3aret.TXT                              | Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE3ascet Curve Fitted.jpg                | Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE3ascet Specimen 1 Data File.xls        | Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE3ascet.TXT                             | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |

(continued on next page)
| CASE | Description | Details |
|------|-------------|---------|
| CASE3tbct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE3tbct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE3tbct.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE4aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE4aret Specimen 1 Data File.xls | Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE4aret.TXT | Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE5tct Curve Fitted.jpg | Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE5tct Specimen 1 Data File.xls | Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE5tct.TXT | Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6accet Curve Fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6accet Specimen 1 Data File.xls | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE6accet.TXT | Biomechanical test of left common carotid artery – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6aret Specimen 1 Data File.xls | Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |

(continued on next page)
| File Name | Description |
|-----------|-------------|
| CASE6aret.TXT | Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6ascet Curve Fitted.jpg | Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6ascet Specimen 1 Data File.xls | Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE6aret.TXT | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6ibtct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6ibtct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE6ibtct.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6accet Curve Fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6accet Specimen 1 Data File.xls | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE6aret.TXT | Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE6aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE6aret Specimen 1 Data File.xls | Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE6ascet.TXT | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |

*(continued on next page)*
Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

(continued on next page)
| CASE9amst Specimen 1 Data File.xls | Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE9amst.TXT | Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE9ardt Curve Fitted.jpg | Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE9ardt Specimen 1 Data File.xls | Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE9ardt.TXT | Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE9ascet Curve Fitted.jpg | Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE9ascet Specimen 1 Data File.xls | Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE9ascet.TXT | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE9bct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE9bct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE9bct.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE9ct Curve Fitted.jpg | Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE9ct Specimen 1 Data File.xls | Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE9ct.TXT | Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE 10 | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |

(continued on next page)
CASE10acet Specimen 1 Data File.xls  
Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10acet.TXT  
Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE10amst Curve Fitted.jpg  
Biomechanical test of superior mesenteric artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE10amst Specimen 1 Data File.xls  
Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10amst.TXT  
Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE10ardt Curve Fitted.jpg  
Biomechanical test of right renal artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE10ardt Specimen 1 Data File.xls  
Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10ardt.TXT  
Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE10ascet Curve Fitted.jpg  
Biomechanical test of left subclavian artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE10ascet Specimen 1 Data File.xls  
Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10ascet.TXT  
Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE10tbct Curve Fitted.jpg  
Biomechanical test of brachiocephalic trunk - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE10tbct Specimen 1 Data File.xls  
Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10tbct.TXT  
Biomechanical test of brachiocephalic trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE10tct Curve Fitted.jpg  
Biomechanical test of celiac trunk - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

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CASE10tct Specimen 1 Data File.xls

Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE10tct.TXT

Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 11

CASE11acet Curve Fitted.jpg

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE11acet Specimen 1 Data File.xls

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE11acet.TXT

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE11ascet Curve Fitted.jpg

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE11ascet Specimen 1 Data File.xls

Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE11ascet.TXT

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 12

CASE12acet Curve Fitted.jpg

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE12acet Specimen 1 Data File.xls

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE12acet.TXT

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

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Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

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CASE13aret Curve Fitted.jpg
Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE13aret Specimen 1 Data File.xls
Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE13aret.TXT
Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE13ascet Curve Fitted.jpg
Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE13ascet Specimen 1 Data File.xls
Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE13ascet.TXT
Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE13tbct Curve Fitted.jpg
Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE13tbct Specimen 1 Data File.xls
Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE13tbct.TXT
Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 14

CASE14accet Curve Fitted.jpg
Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE14accet Specimen 1 Data File.xls
Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE14accet.TXT
Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE14ardt Curve Fitted.jpg
Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE14ardt Specimen 1 Data File.xls
Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE14ardt.TXT
Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

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CASE14aret Curve Fitted.jpg  Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE14aret Specimen 1 Data File.xls  Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE14aret.TXT  Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE14ascet Curve Fitted.jpg  Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE14ascet Specimen 1 Data File.xls  Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE14ascet.TXT  Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE14tbct Curve Fitted.jpg  Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE14tbct Specimen 1 Data File.xls  Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE14tbct.TXT  Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 15

CASE15 acce Curve Fitted.jpg  Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE15 acce Specimen 1 Data File.xls  Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE15 acce.TXT  Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE15 ascet Curve Fitted.jpg  Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE15 ascet Specimen 1 Data File.xls  Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE15 ascet.TXT  Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

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Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

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| CASE 16 | Description |
| --- | --- |
| CASE16tct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE16tct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE16tct.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE 17 | Description |
| CASE17tct Curve Fitted.jpg | Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE17tct Specimen 1 Data File.xls | Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE17tct.TXT | Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE 18 | Description |
| CASE18ascet Curve Fitted.jpg | Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE18ascet Specimen 1 Data File.xls | Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE18ascet.TXT | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE18tbt Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE18tbt Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |
| CASE18tbt.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE 19 | Description |
| CASE19acct Curve Fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE19acct Specimen 1 Data File.xls | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²). |

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| Identification          | Description                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------|
| CASE19acct.TXT          | Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE19tbct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE19tbct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk – excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE19tct.TXT           | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE20amst Curve Fitted.jpg | Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE20amst Data File.xls | Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE20amst Data report.txt | Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE20ardt Curve Fitted.jpg | Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE20ardt Specimen 1 Data File.xls | Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE20ardt.TXT          | Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE20aret Curve Fitted.jpg | Biomechanical test of left renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE20aret Specimen 1 Data File.xls | Biomechanical test of left renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE20aret.TXT          | Biomechanical test of left renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE20tct Curve Fitted.jpg | Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE20tct Specimen 1 Data File.xls | Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |

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Biomechanical test of left common carotid artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).-
| CASE21tct.TXT | Biomechanical test of celiac trunk - biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE22ascal Fitted.jpg | Biomechanical test of left common carotid artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE22ascal Specimen 1 Data File.xls | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE22ascal Specimen 1 Data report.txt | Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE22asrel Curve Fitted.jpg | Biomechanical test of superior mesenteric artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE22asrel Specimen 1 Data File.xls | Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE22asrel.TXT | Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE22ardt Curve Fitted.jpg | Biomechanical test of right renal artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE22ardt Specimen 1 Data File.xls | Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE22ardt.TXT | Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE22ascet Curve Fitted.jpg | Biomechanical test of left subclavian artery - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE22ascet Specimen 1 Data File.xls | Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE22ascet.TXT | Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE22tct Curve Fitted.jpg | Biomechanical test of brachiocephalic trunk - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE22tct Specimen 1 Data File.xls | Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |

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| CASE23tbct.TXT | Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE23amst.TXT | Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE23amst curve fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE23amst Specimen 1 Data File.xls | Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE23amst curve fitted.jpg | Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE23amst Specimen 1 Data File.xls | Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE23amst curve fitted.jpg | Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE23tct curve fitted.jpg | Biomechanical test of celiac trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |
| CASE23tct Specimen 1 Data File.xls | Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2). |
| CASE23tct curve fitted.jpg | Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample. |
| CASE24acet curve fitted.jpg | Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture. |

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Biomechanical test of left common carotid artery – excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It includes critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

Biomechanical test of left common carotid artery – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left subclavian artery – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

Biomechanical test of left common carotid artery – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

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CASE25ams.xls  Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE25amst.TXT  Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE25ardt Curve Fitted.jpg  Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE25ardt Specimen 1 Data File.xls  Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE25ardt.TXT  Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE25ascet Curve Fitted.jpg  Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE25ascet Specimen 1 Data File.xls  Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE25ascet.TXT  Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE25btct Curve Fitted.jpg  Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE25btct Specimen 1 Data File.xls  Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE25btct.TXT  Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE25ct Curve Fitted.jpg  Biomechanical test of celiac trunk - chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE25ct Specimen 1 Data File.xls  Biomechanical test of celiac trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m²).

CASE25ct.TXT  Biomechanical test of celiac trunk - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 26

CASE26ascet Curve Fitted.jpg  Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

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CASE26acet Specimen 1 Data File.xls

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE26ardt.TXT

Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE26ardt Curve Fitted.jpg

Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE26ascet Specimen 1 Data File.xls

Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE26ascet.TXT

Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE26tbct Curve Fitted.jpg

Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE26tbct Specimen 1 Data File.xls

Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE26tbct.TXT

Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE 27

CASE27acet Curve Fitted.jpg

Biomechanical test of left common carotid artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

CASE27acet Specimen 1 Data File.xls

Biomechanical test of left common carotid artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

CASE27acet.TXT

Biomechanical test of left common carotid artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments' conditions, such as temperature and humidity, as well as the width and thickness of the sample.

CASE27amst Curve Fitted.jpg

Biomechanical test of superior mesenteric artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

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2. Experimental Design, Materials and Methods

2.1. *biomechanical uniaxial test*

The aortic branches submitted to biomechanical analysis were: brachiocephalic trunk, left carotid artery, left subclavian artery, celiac trunk, superior mesenteric artery, and renal arteries. During the autopsy procedure, the whole aorta (thoracic and abdominal parts, up to the iliac vessels) was harvested along with its branches. They were then frozen and stored for the shorter period possible, as the autopsy procedure could happen when there were not available collaborators to run the experiment. stemper et al. [3] experimentally observed no significant difference in biomechanical behavior between fresh vessel samples and frozen specimens up to

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**CASE27amst Specimen 1 Data File.xls** Biomechanical test of superior mesenteric artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

**CASE27amst.TXT** Biomechanical test of superior mesenteric artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

**CASE27ardt Curve Fitted.jpg** Biomechanical test of right renal artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

**CASE27ardt Specimen 1 Data File.xls** Biomechanical test of right renal artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

**CASE27ardt.TXT** Biomechanical test of right renal artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

**CASE27ascet Curve Fitted.jpg** Biomechanical test of left subclavian artery – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

**CASE27ascet Specimen 1 Data File.xls** Biomechanical test of left subclavian artery - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

**CASE27ascet.TXT** Biomechanical test of left subclavian artery - biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

**CASE27tbct Curve Fitted.jpg** Biomechanical test of brachiocephalic trunk – chart represents the elastic diagram related to this uniaxial tensile test. The elastic diagram (stress-strain curve) is built with force and elongation information until the sample rupture.

**CASE27tbct Specimen 1 Data File.xls** Biomechanical test of brachiocephalic trunk - excel file related to the chart: this excel file contains precisely all the information that enabled the creation of the chart related to this sample. It comprises critical data such as displacement observed during the tensile test (mm), the load applied (N), strain (deformation), tension (N/cm), and stress (N/m2).

**CASE27tbct.TXT** Biomechanical test of brachiocephalic trunk – biomechanical test report: the biomechanical test device produces a report detailing the experiments’ conditions, such as temperature and humidity, as well as the width and thickness of the sample.

**General File**

**Demographic Data Table.xls** Table containing age and gender of all donors
90 days. At the date assigned for the experiment, each aorta was carefully defrosted at room temperature, dissected, and samples were collected from its branches. The aortas were directed to a different research protocol.

The collected arterial segments were kept in a 0.9% saline solution chilled at 4 °C until the biomechanical test was executed within the maximum period of 48 hrs after dissection. The arteries were longitudinally opened and sectioned in strips 4 mm wide for the biomechanical tensile test. Then, the fragments were attached to a clamp system connected to the INSTRON SPEC 2200 device, responsible for pulling the fragments during the uniaxial tensile test. The test was coordinated using INSPEC software. Its standardization was established for aorta samples by Raghavan et al. [4], and was largely reproduced in posterior works [5,6]. The association between deformation values and respective strength values (stress) is made through the PC throughout the tensile test, using the software SERIES IX. A graph denominated elastic diagram is generated.

The uniaxial biomechanical properties measured were: failure stress, failure tension, and failure strain.

**Ethics Statement**

The dataset was approved by the institutional review board (Ethical Committee of University of São Paulo School of Medicine #263/15 and #0027/17). All specimens were harvested during autopsy procedure in the Service for verification of death of University of São Paulo (SVOC – USP). Family members of the donors sign an informed consent applied by the SVOC – USP.

**Declaration of Competing Interest**

The authors declare that they have no known competing financial interests or personal relationships which have, or could be perceived to have, influenced the work reported in this article.

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