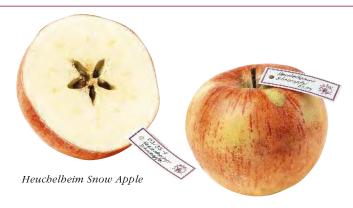




Taking the highest educational and scientific requirements as a benchmark, SOMSO® has been manufacturing originals for 140 years. Their shape and functionality, as well as the fact that they can be dismantled, makes them the tried and tested basis for stimulating teaching. "Nature is our model" - this is the guiding principle for the realistic representation as the standard.

NATURE IS OUR MODEL



SOMSO® Sun - A symbol for quality

The figurative logos of the SOMSO® Sun, SOMSO® and SOMSO®-Plast, as well as the green base for our models, are nationally and internationally registered trademarks. Our manufacturing and delivery programme includes anatomical, zoological, botanical teaching models as well as medical training phantoms. Continuing development and on-going input by renowned scientists and experts, guarantees solid, up-to-date and educationally well-founded imparting of knowledge.



SOMSO[®] MODELLE SINCE 1876



SOMSO® GUARANTEE

SOMSO®, as a worldwide recognised manufacturer, provides a five-year warranty on service life and operational reliability of almost all models (subject to correct use), with the exception of medical training phantoms.



140 YEARS OF EXPERIENCE

In 1876, Marcus Sommer Snr. founded in his home town of Sonneberg,
Thuringia a factory for the manufacture of anatomical models, which back then were all made exclusively by hand. His son Fritz, his grandson Marcus Jnr., his great-grandson Hans, his great-grandson Hans, his great-grandson Louis-Benedikt have continued the company SOMSO MODELLE to its worldwide recognition today.



Founder Marcus Sommer Snr. * 14.11.1845 - † 21.1.1899

A family business of over 140 years is an incentive, as well as a responsibility, for the future, to continue the work of past generations. The tradition of the family business continues: the year 2007 saw the company being converted into a GmbH (limited liability company) and the fifth generation beeing appointed to the management board.



DETAIL IN PRODUCTION

Manufacturing original SOMSO® Models requires a great degree of specialised hand work. Craftsmanship perfects the model. Technology and hand work form a rare symbiosis. SOMSO® Models therefore have that unique, single piece character of manufacture. This way their value exceeds that of a standard industrial product by far. SOMSO® Models are manufactured exclusively by highly qualified skilled employees in Sonneberg, Thuringia and in Coburg, Bavaria.



Somso®-Catalogue A 76/9
Anatomy - Zoology - Botany



STIMULATING LESSONS



Especially in biology classes, it is all about identifying structures and connections. Be it human, animal or plant - the better the model represents reality, the easier it is for the learner to comprehend, to understand. To comprehend means to touch, to look - and the physical-material dimension is added to the intellectual dimension. SOMSO® Models are the ideal complement to dynamic and stimulating teaching.





BoS 15/14-A · Willow Catkin

IMPORTANT PRELIMINARY INFORMATION

- 1. SOMSO® Models are protected by copyright. In case of any replications of SOMSO® Models, we reserve the right to assert injunctive reliefs and claims for damages.
- 2. Close collaboration with scientific institutions ensures that SOMSO® Models are consistently developed in compliance with the current state of scientific knowledge.
- 3. Highly qualified teaching materials for school and science since 1876 SOMSO® Models are mainly made from virtually unbreakable SOMSO® Plast, provided all the numbers in the catalogue A 76/9.
- 4. The versions, dimensions and weights stated in the catalogue can change as a result of technical or scientific improvements. SOMSO® Models are supplied with model descriptions that are prepared by proficient scientists.

- 5. Functional models make biological processes more understandable. In this catalogue, all functional models are marked with an (F). All flexibly mounted skeleton parts of category QS are included under functional models. Functional models are subject to normal wear and tear, due to the nature of the material.
- 6. SOMSO® Models feature true-to-life representation technique, attention to detail and can be disassembled.
- 7. SOMSO® Models are manufactured by a highly qualified and skilled workforce by hand and exclusively in Sonneberg and Coburg.

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THE SOMSO®-MUSEUM AT THE PARENT COMPANY IN SONNEBERG, THURINGIA

On the occasion of the company's 125th anniversary, the Sommer family opened the SOMSO® Museum at the parent company in Sonneberg, Thuringia in 2001. Ten stations, which are constantly updated, showcase the multifaceted model culture of more than 140 years of company history. For more information, visit www.somso-museum.de



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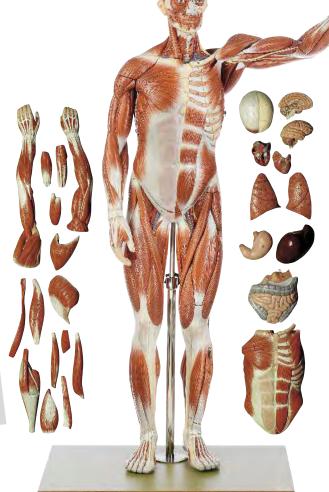
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AS 1 · MALE Muscle Figure

About 1/2 natural size, made from SOMSO®-Plast. Separates into 27 parts in total: cranium; brain (2); thoracic and abdominal wall; halves of the lung (2); heart (2); liver; stomach; duodenum, small and large intestines; right arm; left arm with four removable muscles; muscles of the leg (9); body. On a stand with green base. Height 86 cm, (figure 82 cm), width 49 cm, depth 38 cm, weight 7.2 kg









Natural size, made from SOMSO®-Plast. Separates into 12 parts. On a green base. Height 71 cm (torso 67 cm), width 39 cm, depth 26 cm, weight 8.7 kg

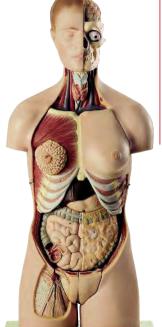


AS 4/1 · Torso with Head AND INTERCHANGE-ABLE MALE AND FEMALE GENITALIA

Natural size, made from SOMSO®-Plast. Separates into 16 parts. On a green base. Height 92 cm (torso 88 cm), width 40 cm, depth 26 cm, weight 12 kg









About 1/4 natural size, made from SOMSO®-Plast. Cannot be disassembled. On a removable green base. Height 53 cm (figure 50 cm), width 33 cm, depth 15 cm, weight 1.5 kg



AS 1

SOMSO® Torso Models - Anatomy AS A HARMONIOUS UNITY FOR MODERN

AS 16

AS 16 · Torso of Young Man with HEAD

Natural size, made from SOMSO®-Plast. Separates into 12 parts. On a green base. Height 91 cm (torso 87 cm), width 39 cm, depth 26 cm, weight 9 kg



AS 23/2 · Torso WITH HEAD AND OPEN BACK

Natural size, made from SOMSO®-Plast, with muscles on one side and interchangeable male and female genitalia. Separates into 20 parts. On a green base. Height 90 cm (torso 86 cm), width 39 cm, depth 26 cm, weight 11.2 kg



AS 20/5 B

AS 20/4 · SMALL TORSO OF YOUNG Man without Head

About 1/3 natural size, made from SOMSO®-Plast. Separates into 7 parts. On a removable base. Height 28 cm (torso 26 cm), width 17.5 cm, depth 14 cm, weight 1.7 kg

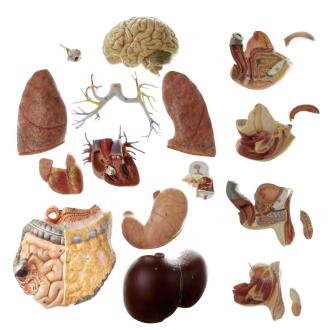
AS 20/5 B · SMALL Torso of Young Man with Head

About 1/3 natural size, made from SOMSO®-Plast. Separates into 9 parts. On a removable base. Height 37 cm (torso 35 cm), width 17.5 cm, depth 14 cm, weight 2.0 kg

AS 20/1 · SMALL Torso of Young Man with Head

About 1/2 natural size, made from SOMSO®-Plast. Separates into 11 parts. On a green base. Height 52 cm (torso 49 cm), width 21 cm, depth 18 cm, weight 3.15 kg





AS 23/2 separates

HAND-CRAFTED MANUFACTURING EXCLUSIVELY IN GERMANY.

SOMSO® Models are manufactured solely by highly qualified, skilled employees in Sonneberg and Coburg. Despite the use of industrial components, the artisan finishing bas the unmistakable character of traditional manufacture. Individual painting by hand makes each and every SOMSO® Model a distinctively unique specimen.

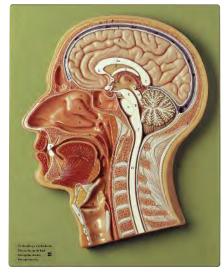






BS 5 \cdot Base of the Head

With removable, 8-part brain with arteries, natural size, made from SOMSO®-Plast. 9 parts in total. On a green base. Height 22 cm, width 18 cm, depth 20 cm, weight 1.5 kg



BS $6/1 \cdot$ Median Section of the Head

Natural size, made from SOMSO®-Plast. In one piece, on a green base. Height 32 cm, width 23 cm, depth 4 cm, weight 1.3 kg



BS 20 · Brain

Natural size, made from SOMSO®-Plast. Separates into 8 parts: frontal and parietal lobes (2), temporal and occipital lobes (2), brain stem (2), cerebellum (2). On a transparent base. Height 15 cm, width 16 cm, depth 17 cm, weight 1.1 kg



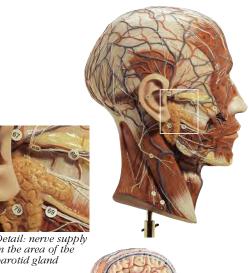
BS 21 · Brain

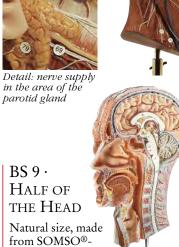
Natural size, made from SOMSO®-Plast. In median section, separates into 2 parts in total. On a transparent base. Height 15 cm, width 16 cm, depth 17 cm, weight 800 o



BS 22 · Brain

Natural size, made from SOMSO®-Plast. Separates into 4 parts. On a transparent base. Height 15 cm, width 15 cm, depth 17 cm, weight 1.1 kg







BS 18 · HEAD WITH MUSCLES AND VESSELS

About 3/4 natural size, made from SOMSO®-Plast. Separates into 5 parts: head, cranium, right and left half of the brain (2 parts). On a removable green base. Height 28 cm, width 18 cm, depth 19 cm, weight 1.9 kg

Plast. Cannot be disassembled. On

a stand with green

base. Height 41cm,

width 18 cm,

depth 22 cm,

weight 1.3 kg





BS 25 · Model of the Brain in 15 Parts

Natural size, made from SOMSO®-Plast, after Prof. Dr. med. Dr. med. h.c. J. W. Rohen, Anatomical Institute of the University of Erlangen. On a green base. Height 23 cm, width 15 cm, depth 18 cm, weight 1.8 kg



BS 24 · VENTRICULAR CAVITIES OF THE BRAIN

Natural size, made from SOMSO®-Plast, after a specimen at the Anatomical Institute of Würzburg. On a stand with green base. Height 23 cm, width 15 cm, depth 18 cm, weight 200 g



BS 5/5 View from above



BS 25 disassembled

For individual parts, see illus-

disassembled

tration of BS 25





BS 5/5 · ANATOMICAL SECTIONAL MODEL OF THE HEAD

Natural size, made from special plastic (combined with corresponding CT and MR imaging), after Prof. Dr. med. Dr. med. h.c. J. W. Rohen, Anatomical Institute of the University of Erlangen. The sections shown in the model are mounted on a vertical support so that they can be swivelled out individually and then compared with the respective CT or MR image. On a stand with green base. Height 34 cm, width 46 cm, depth 30 cm, weight 6.2 kg



Section 4



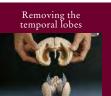
Natural size, made from SOMSO®-Plast, after Prof. Dr. med. Dr. med. h.c. J. W. Rohen, Anatomical Institute of the University of Erlangen. On a green base. Height 23 cm, width 15 cm, depth 18 cm, weight 1.8 kg



SOMSO® MODELS
FOR SCHOOL AND SCIENCE
SOMSO® Models are used in many
areas of education. The range of
models takes into consideration
models takes into consideration
the requirements of both a lecture
theatre and a seminar. Renowned
theatre and a seminar be continuous
professors contribute to the continuous
development and improvement of
SOMSO® Models.



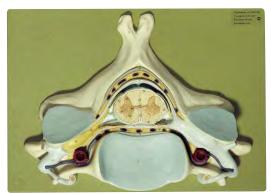






















BS 27 · NERVOUS SYSTEM

Relief model, about 1/2 natural size, made from SOMSO®-Plast. Schematic representation of the central and peripheral nervous system. In one piece, on a green base. Height 91 cm, width 32 cm, depth 6 cm, weight 5.5 kg

BS 30 · Fifth Cervical Vertebra

Enlarged approximately 7 times, made from SOMSO®-Plast. The model shows a cross section of the spinal cord with spinal nerves, spinal ganglion, vertebral artery and vein. In one piece, on a green base. Height 28 cm, width 40 cm, depth 10 cm, weight 1.6 kg

BS 29 · CERVICAL VERTEBRA (C VI) WITH SPINAL CORD

Natural size, made from SOMSO®-Plast. Spinal nerves, spinal ganglion, and vertebral artery are shown. Spinal cord also shown in cross section. Cannot be disassembled. On a stand with green base. Height 14 cm, width 12 cm, depth 12 cm, weight 100 g

BS 28/1 · THORACIC VERTEBRA (TH II) WITH SPINAL CORD

Natural size, made from SOMSO®-Plast. Spinal nerves, spinal ganglion, spinal cord in cross section. Cannot be disassembled, on a stand with green base. Height 14 cm, width 12 cm, depth 12 cm, weight 200 g



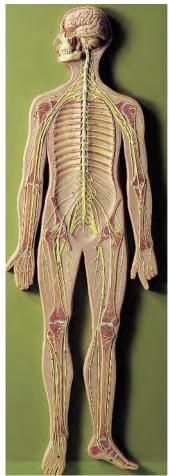
Natural size, made from SOMSO®-Plast. Nerve endings, filum terminale, and cauda equina of the spinal cord (also in cross section) are shown. Separates into 2 parts. On a stand with green base. Height 15 cm, width 12 cm, depth 13 cm, weight 200 g

BS 31 · SPINAL CORD WITH VERTEBRAL CANAL

Seen from the ventral side, natural size, made from SOMSO®-Plast. The model shows the brain stem and the spinal cord, as well as the nerve branches up to the coccygeal plexus. On the left side, the sympathetic trunk with its connections to the central nervous system is shown. Cannot be disassembled. On a green base. Height 90 cm, width 32 cm, depth 19 cm, weight 5.5 kg

BS 32/37 · Spinal Cord in Spinal Canal

Enlarged approximately 5 times. Section through the spinal cord enlarged approximately 10 times, made from SOMSO®-Plast. Cannot be disassembled. Mounted on green base, with removable dust cover. Height 18.5 cm, width 32 cm, depth 9 cm, weight 600 g



BS 27



BS 31



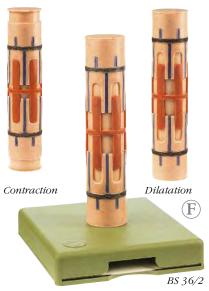


BS 35/3



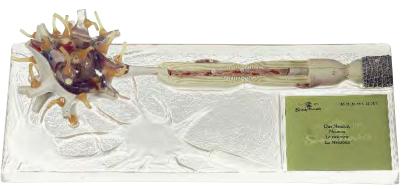
BS 35/1 · NEURON

Enlarged approx. 2.500 times, made from SOMSO®-Plast. Structures visible under light and electron microscopes are taken into consideration, with separate, myelinated nerve fibre. In one piece, on a green base. Height 40 cm, width 28 cm, depth 14 cm, weight 1.5 kg



BS $36/2 \cdot \text{Functional}$ Model of a Myofibril

Enlarged approx. 10.000 times, made from SOMSO®-Plast. After Prof. Dr. med. Elke Lütjen-Drecoll and Prof. Dr. med. Dr. med. h.c. J. W. Rohen. In one piece and on a removable green base. Height 21 cm, width 14 cm, depth 16 cm, weight 400 g



BS 35 · NEURON

Enlarged approx. 2.500 times, made from SOMSO®-Plast. Consisting of nerve cell body and myelinated nerve fibre. Based on electron-microscope findings. Separates into 3 parts in total. On a removable transparent base. Height 22 cm, width 53 cm, depth 17 cm, weight 2.2 kg

BS 35/3 · Model of a Synapse

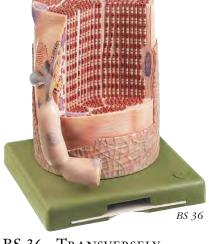
Enlarged many times over, made from SOMSO®-Plast. Representation of neurotubules, neurofilaments, and synaptic vesicles as well as post- and pre-synaptic membrane structures. In one piece and on a removable transparent base. Height 21 cm, width 22 cm, depth 22 cm, weight 900 g



BS 36/1 · Skeletal Muscle Fibre with Functional Model

Enlarged approx. 15.000 times, made from SOMSO®-Plast. After Prof. Dr. med. Elke Lütjen-Drecoll and Prof. Dr. med. Dr. med. h.c. J. W. Rohen. Separates into 3 parts, on a green base. Height 21 cm, width 26 cm, depth 18 cm, weight 1.7 kg





BS 36 · Transversely Striated Muscular Fibre with Motor End-Plate

Enlarged approx. 4.000 times, made from SOMSO®-Plast. In one piece, on a green base. Height 20 cm, width 18 cm, depth 18 cm, weight 1 kg



BS 36/1 disassembled

SOMSO® MODELS FOR

STIMULATING BIOLOGY LESSONS
Thanks to the company's high
standard of quality and the sense
of responsibility towards young
students both at schools and
students both at schools and
universities, SOMSO® Models are a
universities, companion on their excitreliable companion on their exciting journey of discovery through
the miracle of the buman body.

ITS DIVERSITY AND ACCURACY.



Representation of Cauda Equina



BS 35 BS 35/1 Representation of the Node of Ranvier





CS 2/2 · **ORBITAL** CAVITY WITH EYEBALL

Enlarged approximately 3 times, made from SOMSO®-Plast. Separates into 9 parts. On a green base. Height 21 cm, width 20 cm, depth 32 cm, weight 1.4 kg

Eyeball

borizontal

diameter

8 cm

CS 13



CS 21/1 · RIGHT HALF OF THE EYE ON A BASE

Enlarged approximately 6 times, made from SOMSO®-Plast. Cannot be disassembled. Height 18 cm, width 21 cm, depth 18.5 cm, weight 900 g

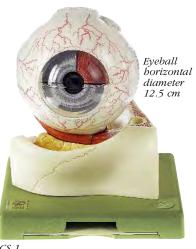
CS 13 · EYEBALL

Enlarged approximately 4 times, made from SOMSO®-Plast. The anatomy of the eyeball in different sectional levels is clearly demonstrated in this model (cannot be disassembled). On a stand with green base. Height 21 cm, width 12 cm, depth 12 cm, weight 200 g



imately 4 times, made from SOMSO®-Plast. Separates into 6 parts: choroid membrane (2), sclera (2), vitreous body, lens. On a green base. Height 18 cm, width 12 cm, depth 12 cm, weight 400 g





CS 1

CS 5

Eyeball

9.5 cm

horizontal diameter

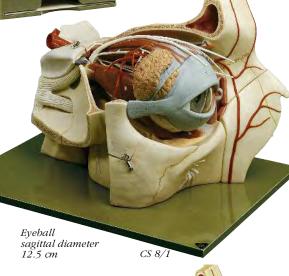


CS1· EYEBALL

Enlarged approximately 5 times, made from SOMSO®-Plast. Separates into 7 parts. On a green base. Height 21 cm, width 18 cm, depth 18 cm, weight 1.2 kg

CS 8/1 · Topography OF THE ORBIT

Enlarged approximately 5 times, made from SOMSO®-Plast. The orbital process of the frontal bone and the small wing of the sphenoid bone have been removed in order to allow a view of the bony orbital cavity. The six muscles of the eye are modelled very clearly. All important nerves and blood vessels are represented. With lacrimal apparatus and the supporting apparatus of the eyelids. Separates into 9 parts in total. On a green base. Height 32 cm, width 45 cm, depth 37 cm, weight 5.5 kg





Anatomy



resentation



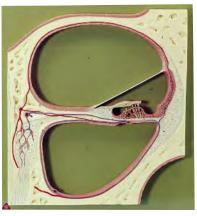


Representation of the ciliary



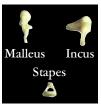
EAR

8



DS 10 · Section Through THE CENTRAL SPIRAL OF THE **COCHLEA**

Enlarged approximately 350 times, made from SOMSO $^{\tiny{\circledR}}$ -Plast. The scala vestibuli, the scala tympani, the cochlear duct with tectorial membrane, and the organ of Corti are shown. Cannot be disassembled. On a green base. Height 51 cm, width 48 cm, depth 5 cm, weight 3.8 kg





QS 69 · The Three **AUDITORY OSSICLES**

Natural size, made from SOMSO®-Plast. Malleus, incus, and stapes mounted under Plexiglas cover, removable from green base. Height 3 cm, width 12 cm, depth 12 cm, weight 80 g



DS 3 · EAR

Enlarged approximately 3 times, made from SOMSO®-Plast. Tympanic membrane with malleus and incus as well as labyrinth with stapes can be removed. 3 parts in total. On a green base. Height 21 cm, width 32 cm, depth 19 cm, weight



DS 13 · LABYRINTH

Enlarged approximately 18 times, made from SOMSO®-Plast. The superior semicircular canal and vestibule are open, showing the saccule and utricle. The cochlea separates longitudinally. 2 parts in total. On a stand with green base. Height 33 cm, width 24 cm, depth 18 cm, weight 800 g



Inner ear of DS 5 disassembled

SINCE 1876

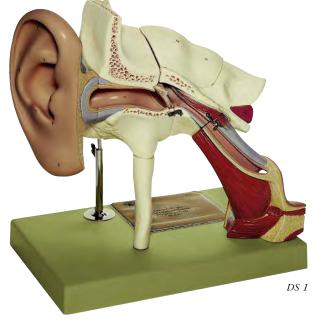
DS $5 \cdot EAR$

Enlarged approximately 3 times, made from SOMSO®-Plast. Separates into 6 parts. On a green base. Height 21 cm, width 32 cm, depth 19 cm, weight 1.5 kg



DS1· EAR WITH PINNA

Enlarged approximately 4 times, made from SOMSO®-Plast. Separates into pinna, petrous bone (3), tympanic membrane, labyrinth (2), Eustachian tube. 8 parts in total. On a stand with green base. Height 41 cm, width 44 cm, depth 26 cm, weight 3.7 kg

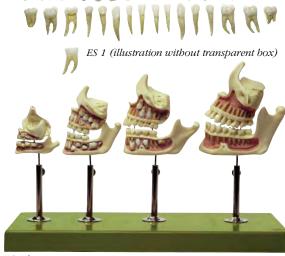


ES 1 · SET OF TEETH OF AN ADULT

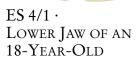
Natural size, made from SOMSO®-Plast. Consisting of 32 artificial teeth in a transparent box that can be opened. Height 4 cm, width 13 cm, depth 9 cm, weight 100 g











Enlarged approximately 3 times, made from SOMSO®-Plast. 6 parts in total. On a stand with green base. Height 34 cm, width 34 cm, depth 18 cm, weight 1.6 kg



ES 11 ·

FIVE MODELS OF TEETH

Enlarged approximately 8 times; each model mounted on a stand with green base, made from SOMSO®-Plast. Weight 2.2 kg

AS INDIVIDUAL MODELS:

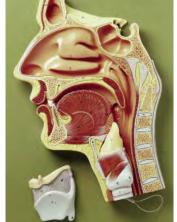
ES 11/1 - LOWER INCISOR

ES 11/2 - Lower Canine

ES 11/3 - Lower Molar with One Root

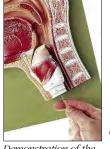
ES 11/4 - Lower Molar with Two Roots

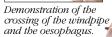
ES 11/5 - FIRST UPPER MOLAR WITH THREE ROOTS





Enlarged approximately 2 times, made from SOMSO®-Plast. The larynx can be disassembled, the epiglottis is elastic and movable. The crossing of the windpipe and the oesophagus can be easily demonstrated. Separates into 2 parts, on a green base. Height 40 cm, width 28 cm, depth 9 cm, weight 1.6 kg







disassembled



ES 14 ·

DEVELOPMENT OF a Set of Teeth Natural size, made from

SOMSO®-Plast. Repre-

depth 11 cm, weight 700 g

Molar Tooth WITH CARIES

Enlarged approximately 8 times, made from

SOMSO®-Plast. Separa-

tes into 3 parts. Showing

dental caries in initial and

Height 24 cm, width 12 cm,

depth 12 cm, weight 400 g

advanced stages. On a

stand with green base.

disassembled

sentation of halves of the jaw, cannot be disassembled. On a stand with green base. Height 24 cm, width 33 cm,

FS 8 · Tongue

Natural size, made from SOMSO®-Plast. Median section with one part of the lower jaw removable. Separates into 3 parts. On a stand with green base. Height 14 cm, width 12 cm, depth 12 cm, weight 300 g



Model of a Set

оғ Теетн

imately 3 times, Enlarged approxwith large toothbrush to demonstrate tooth brushing, made from SOMSO®-Plast. After an original at the Bundeszentrale für gesundheitliche Aufklärung (Federal Centre for Health Education) in Cologne. Height 14 cm, width 19 cm, depth 25 cm, weight 1.3 kg





AND LARYNX



GS 4 · LARYNX WITH TONGUE

Natural size, made from SOMSO®-Plast. Separates into 5 parts. On a green base. Height 21 cm, width 12 cm, depth 15 cm, weight 500 g

GS 4/2 ·

LARYNX WITH TRACHEA

Natural size, made from SOMSO®-Plast. Separates into 2 parts in total. On a stand with green base. Height 39 cm, width 20 cm, depth 18 cm, weight 700 g

LARYNX

Enlarged approximately 2 times, made from SOMSO®-Plast. Separates into 2 halves medially. Removable parts are: right thyroid cartilage, cricothyroid muscle and thyrohyoid muscle. The inner and outer laryngeal muscles, the relief of mucous membrane, artery and nerve supply and the cartilaginous skeleton can be demonstrated. Separates into 5 parts in total. On a stand with green base. Height 22 cm, width 12 cm, depth 12 cm, weight 700 g



GS6· Cartilages of the Larynx

GS 4/2

Functional model, enlarged approximately 2.5 times, made from SOMSO®-Plast. Arytenoid cartilage, vocal folds and epiglottis are flexibly mounted. Cannot be disassembled. On a green base. Height 28 cm, width 12 cm, depth 14 cm, weight 700 g

GS 10 · FUNCTIONAL MODEL OF THE LARYNX

Enlarged approximately 3 times, made from SOMSO®-Plast. The opening and closing of the glottis, the variation in tension of the vocal chord and the change of position can be demonstrated in an intuitively accessible way. This model can not be disassembled. On a green base. Height 33 cm, width 18 cm, depth 18 cm, weight 1.5 kg



GS 6 - Opening of the Glottis



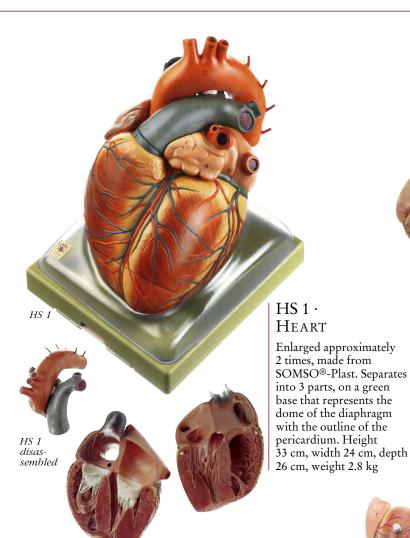
GS 6 - Closing of the Glottis



GS 10 - Tilting of the Thyroid Cartilage



GS 10 - Rotational Movement of the Arytenoid Cartilage









HS 3 · HEART

3/4 natural size, made from SOMSO®-Plast. Separates into 2 parts. On a stand with green base, height 22 cm, width 13 cm, depth 12 cm, weight 400 g



HS 4 · HEART

Natural size, made from SOMSO®-Plast. Separates into 2 parts. On a stand with green base. Height 27 cm, width 12 cm, depth 14 cm, weight 600 g



HS 4 disassembled



HS 7 complete



HS 7 disassembled



HS 5 disassembled



HS 5 · HEART

Enlarged approximately 1.5 times, made from SOMSO®-Plast. Separates into 4 parts. On a stand with green base. Height 32 cm, width 18 cm, depth 19 cm, weight 1 kg

HS 7 · Lungs with HEART, DIA-PHRAGM, AND LARYNX

3/4 natural size, made from SOMSO®-Plast. Separates into 7 parts in total. On a green base. Height 39 cm, width 28 cm, depth 12 cm, weight 2.3 kg









HS 23/1

HS 23/1 · LOBULE OF THE

Enlarged approximately 150 times, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. Height 43 cm, width 23 cm, depth 18 cm, weight 1.4 kg

HS 10 · CIRCULATORY SYSTEM

Relief model, 1/2 natural size, made from SOMSO®-Plast. Overview of the vascular supply of the body. Can not be disassembled. On a green base. Height 91 cm, width 32 cm, depth 7 cm, weight 4.7 kg



Enlarged approximately 11,000 times, made from SOMSO®-Plast. Cannot be disassembled. weight 80 g



HS 10

HS 25/2 · ARTERY AND VEIN

Enlarged many times over, made from SOMSO®-Plast. The model has been made after a vascular preparation of the lower leg. Representation of the individual vascular layers, the valves of veins are shown closed and open. In one piece, on a green base. Height 63 cm, width 39 cm, depth 26 cm, weight 4.2 kg



HS 25/2

HS 19 · Lymph Node

Sectional view, enlarged approximately 25 times, made from SOMSO®-Plast. Semischematic representation of the internal structure of a lymph node with afferent and efferent vessels. Can not be disassembled. On a stand with green base. Height 30 cm, width 22 cm, depth 12 cm, weight 1.2 kg

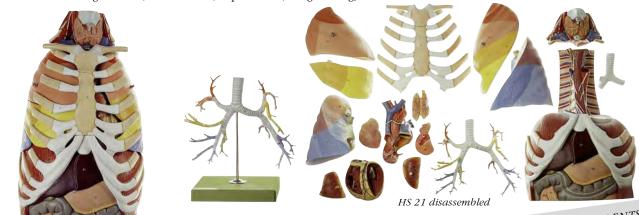


HS 19

HS 21 · I disassembled. W ANATOMY OF THE THORAX

HS 20/1

Natural size, made from SOMSO®-Plast. Separates into sternum, organs of the neck, right lung (3), left lung (2), heart (7), bronchial tree, base model. 17 parts in total. On a green base. Height 52 cm, width 39 cm, depth 26 cm, weight 7.1 kg (bronchial tree: for HS 21 height 31 cm, width 21 cm, depth 18 cm, weight 400 g)



HS 21

THE

SOMSO® MODELS FOR THE TRAINING OF MEDICAL STUDENTS Training future health professionals presents universities with challenges that can be solved in part with SOMSO® with challenges that can be solved in part with SOMSO® Models are manufactured for many disciplines, Models. SOMSO® Models are manufactured. The functional offering valuable assistance in teaching. The functional aspecial role, as they facilitate - in part models play a special role, as they facilitate - in part models play a special role, as they factors for the use of models care exercises and diagnoses. Key factors for the use of realistic exercises and diagnoses. Key factors for the use of some solution of the models. SOMSO® Models in medicine are the true-to-life representation, scientific accuracy, and realistic handling of the models.

HS 7 Vertical Lung Section



HS 5 Tricuspid Aortic Valve



HS 4 Aortic and Bicuspid Aortic



IS 5 · LIVER

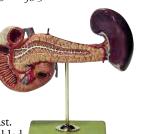
Natural size, made from SOMSO®-Plast. Showing the four lobes of the liver, the beginnings of the peritoneum, the gall bladder and vessels. Cannot be disassembled. On a stand with green base. Height 27 cm, width 19 cm, depth 18 cm, weight 700 g



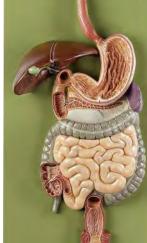


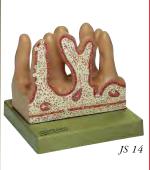
IS 11 · **PANCREAS** WITH SPLEEN AND **DUODENUM**

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. Height 23 cm, width 22 cm, depth 12 cm, weight 300 g









JS 4 disassembled

IS 4 · **S**TOMACH

Natural size, made from SOMSO®-Plast. Separates into 2 parts, on a stand with green base. Height 34 cm, width 19 cm, depth 18 cm, weight 800 g

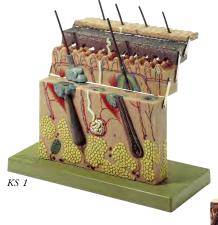
IS 14 · Internal SURFACE OF THE JEJUNUM

Enlarged approximately 400 times, made from SOMSO®-Plast. After Prof. Dr. E. Wüstenfeld, model made by E. Rack, Anatomical Institute, Würzburg. The digitiform protrusions represent villi, the indentations show crypts. A cut surface reveals the histological structure of a villus. Cannot be disassembled. On a green base. Height 17 cm, width 18 cm, depth 18 cm, weight 600 g

IS $2/1 \cdot$ DIGESTIVE SYSTEM

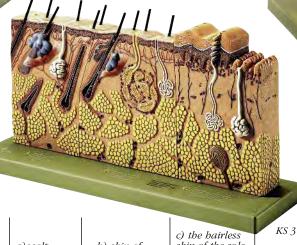
Natural size, relief model, partly opened up, made from SOMSO®-Plast, showing the alimentary canal from the mouth to the rectum. Separates into 2 parts. On a green base. Height 91 cm, width 32 cm, depth 12 cm, weight 4.7 kg

JS 2/1



KS 3 · BLOCK MODEL OF SECTIONAL OF SKIN

Enlarged approximately 70 times, made from SOMSO®-Plast. The model shows: a) scalp with hair, b) skin of the axilla, c) the hairless skin of the sole of the foot. Cannot be disassembled. On a green base. Height 25 cm, width 47 cm, depth 15 cm, weight 2.2 kg



a)scalp with hair

b) skin of

skin of the sole of the foot

KS 4 · BLOCK MODEL OF THE SKIN

KS 4

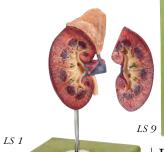
Enlarged approximately 70 times, made from SOMSO®-Plast. Showing the scalp with hair in different sectional planes. Cannot be disassembled. On a green base. Height 21 cm, width 20 cm, depth 11 cm, weight 1.3 kg

KS 1 · SECTION OF SKIN

Enlarged approximately 70 times, made from SOMSO®-Plast. The layers of the skin can be separated to form terraces, showing the follicle and root of the hair (threedimensional and in section), the sweat gland and the sensory organs of the skin. Separates into 4 parts. On a green base. Height 27 cm, width 33 cm, depth 15 cm, weight 1.8 kg

Anatomy





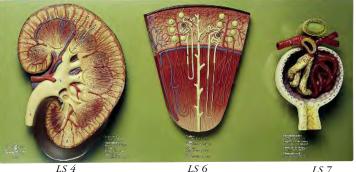
LS 1 · RIGHT KIDNEY AND ADRENAL GLAND

Natural size, made from SOMSO®-Plast. Kidney separates into 2 halves longitudinally. On a stand with green base. Height 26 cm, width 12 cm, depth 12 cm, weight 400 g



MS 1 · MEDIAN SECTION OF THE FEMALE PELVIS

Natural size, made from SOMSO®-Plast. Separates into 2 parts. On a green base. Height 33 cm, width 27 cm, depth 12 cm, weight 1.5 kg



LS 4 · RIGHT KIDNEY

Enlarged approximately 3 times, made from SOMSO®-Plast. Frontal section seen from behind. Cannot be disassembled. On a green base. Height 32 cm, width 26 cm, depth 7 cm, weight 1 kg

LS 6 · Nephron

Enlarged approximately 120 times, made from SOMSO®-Plast. Cannot be disassembled. On a green base. Height 32 cm, width 26 cm, depth 4 cm, weight 700 g

LS 7 · GLOMERULUS

Also called Malpighian corpuscle, enlarged approximately 700 times, made from SOMSO®-Plast. Cannot be disassembled. On a green base. Height 32 cm, width 18.5 cm, depth 8 cm, weight 800 g

LS 9 · Kidney, Nephron, and Glomerulus

Combination of models LS 4, LS 6 and LS 7, on a green base. Cannot be disassembled. Made from SOMSO®-Plast. Height 30 cm, width 65 cm, depth 9 cm, weight 3 kg





MS 5/1 · Female Genital Organs

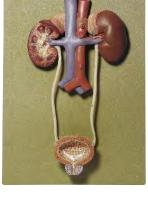
Natural size, made from SOMSO®-Plast. 4 parts in total. On a stand with green base. Height 16 cm, width 18 cm, depth 18 cm, weight 900 g

MS 3/1 · MALE GENITAL ORGANS

Natural size, made from SOMSO®-Plast. 4 parts in total. On a stand with green base. Height 18 cm, width 18 cm, depth 18 cm, weight 800 g

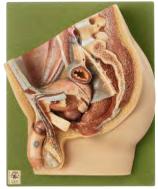
MS 3/2 · Model of the Male Sexual Organs

Natural size, made from SOMSO®-Plast. Developed in co-operation with Angelika Beck, deputy head teacher. Height 27 cm, width 36 cm, depth 24 cm, weight 2.8 kg



LS 3/1 · Urinary Tract

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a green base. Height 40 cm, width 28 cm, depth 10 cm, weight 1.1 kg



MS 2 · MEDIAN SECTION OF THE MALE PELVIS

Natural size, made from SOMSO®-Plast. 4 parts in total. On a green base. Height 33cm, width 27 cm, depth 14 cm, weight 1.3 kg



MS 5/2 · Model of the Female Sexual Organs

Natural size, made from SOMSO®-Plast. Developed in co-operation with Angelika Beck, deputy head teacher. Height 23 cm, width 49 cm, depth 26 cm, and weight 2.5 kg



ANATOMY

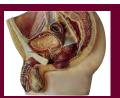




MS 1 -Female Pelvis, Sectional plane of the organs of the lesser pelvis



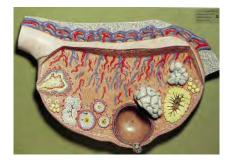
MS 2 -Male Pelvis, Sectional plane after taking off the bladder, seminal vesicle and penis half.





MS 15 · **FERTILISATION** AND DEVELOP-MENT OF THE Human Ovum UP TO THE 3RD Month

Represented on 16 individual models, made from SOMSO®-Plast. Collection in a display case with removable Plexiglas cover. Height 49 cm, width 57 cm, depth 11 cm, weight 5.7 kg



MS 51 · Relief Model of THE OVARY

Enlarged approximately 10 times, made from SOMSO®-Plast. Plastic representation of the follicle in different stages of maturity, of the corpus rubrum, luteum, and albicans. Cannot be disassembled. On a green base. Height 28 cm, width 40 cm, depth 8 cm, weight 1.8 kg

MS 12 · SERIES SHOWING PREGNANCY

Natural size, made from SOMSO®-Plast. 8 uterus representations with embryos and foetuses from 1st to 7th month of pregnancy. 14 parts in total. Each model on an individual stand with green base. Total weight of the series 3.5 kg

The stages of series MS 12 are also available individually.

MS 11 · **EMBRYO**

Enlarged approximately 25 times, made from SOMSO®-Plast. The model shows an approximately 4-weekold embryo. Cannot be disassembled. On a stand with green base. Height 25 cm, width 14 cm, depth 12 cm, weight 300 g



MS 11



MS 12





MS 16 · FETAL CIRCULA-TORY SYSTEM

Natural size, made from SOMSO®-Plast. Represented on a female foetus (before birth) with umbilical cord and placenta. The thoracic and abdominal cavities as well as the heart are opened. The ductus venosus and the ductus arteriosus are shown. Separates into 2 parts. On a green base. Height 48 cm, width 30 cm, depth 14 cm, weight 2.8 kg

MS 13 · PELVIS WITH Uterus in NINTH MONTH OF PREGNANCY

Natural size, made from SOMSO®-Plast. The model shows the right half of the female pelvis in median section. Foetus can be removed. 2 parts in total, on a green base. Height 41 cm, width 39 cm, depth 29 cm, weight 4.9 kg



ANATOMY



MS 12 · Series Showing Pregnancy

MS 12/2 · Fetus in 2nd month (8th week) MS 12/3 · Fetus in 3rd month (11 ½ weeks)

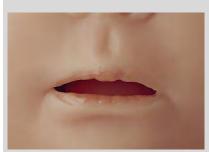
MS 12/4 · Embryo in 4th-5th month (17th week)

MS 12/7 · Embryo in 6th month (28th week)

MS 12/8 · Twin foetuses in 5th month (20th week)



1. Different eye colours are available for the SOMSO® nursing babies MS 52 and MS 53 as a special version.



2. Models MS 52 and MS 53 are available with their mouth open or closed.



3. They come with a lifelike auditory canal for ear care.



4. Models MS 52, MS 53, MS 57, MS 58, MS 59, MS 60 and MS 61 bave soft and moveable arms and legs.



5. For all further enquiries, each baby has its own SOMSO®identification number.

MS 33/E · DOLL FOR BABY CARE

Made from SOMSO®-Plast. Ball joints allow natural movement of the head, arms, and legs; with anus. Suitable for bathing, changing nappies, and practising holding. With brown artificial eyes. Unclothed. Head circumference 36 cm, length 49 cm, weight 3 kg



 $MS 33/E-B \cdot$ DOLL FOR BABY CARE

Same specification as MS 33/E, however with dark skin.



MS 52 · Nursing BABY, FEMALE

Corresponding to a 6-week-old baby, made from SOMSO®-Plast. Head circumference 35.8 cm, lengt 54 cm, weight 3.3 kg

MS 53/B · Nursing BABY, MALE

Same specification as MS 52, but male and with dark skin, made from SOMSO®-Plast. Head circumference 35.4 cm, length 54 cm, weight 3.5 kg



Made from soft SOMSO®-Plast. With ball joints; head moves easily and tilts backwards. With open mouth, umbilical cord and anus. Suitable for bathing, changing nappies and practising holding. Unclothed. Head circumference 34 cm, length 46 cm, weight 2.2 kg



Baby Nursing Doll, Nursing Care Baby 1: Age-appropriate size and weight 2: Natural movement of joints and head

3: Eyes and hair painted by hand 4: Robust joints for frequent use

MS 58

5: Waterproof finish

6: 5-year warranty











NS 55 · Functional Model of the Hand and Finger Joints

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base (removable). Height 36 cm, width 18 cm, depth 19 cm, weight 400 g

NS 15 · MUSCLES OF THE ARM WITH SHOULDER GIRDLE

Natural size, made from SOMSO®-Plast. Separates into 6 parts. On a stand with green base, can be rotated. Height 105 cm, width 39 cm, depth 26 cm, weight 4.6 kg

NS 52 · Functional Model of the Elbow Joint

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a removable stand with green base. Height 41 cm, width 19 cm, depth 22 cm, weight 650 g

NS 53 · FUNCTIONAL MODEL OF THE SHOULDER JOINT

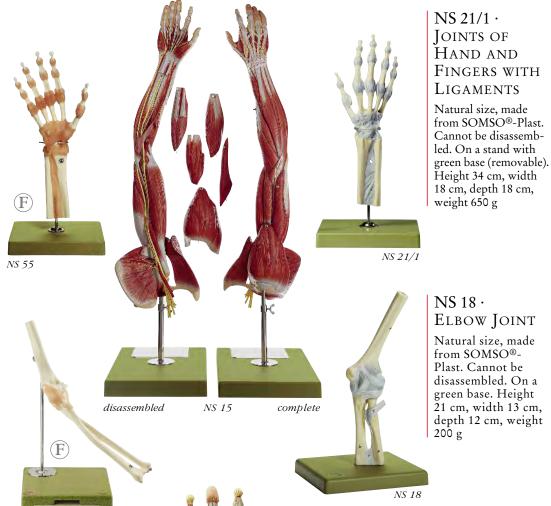
Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a removable stand with green base. Height 26 cm, width 19 cm, depth 22 cm, weight 650 g

NS 13 ·

Muscles of the Hand with Base of the Fore-Arm

NS 53

Natural size, made from SOMSO®-Plast. Showing the blood vessels and nerves as well as the ligamentous apparatus. Separates into 5 parts in total. On a stand with green base. Height 34 cm, width 14 cm, depth 12 cm, weight 500 g



NS 17 · Shoulder

IOINT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. Height 23 cm, width 19 cm, depth 19 cm, weight 500 g



NS 13 disassembled

- NS 43 · SECTION THROUGH THE KNEE JOINT (illustration see page 18)
- NS 44 · SECTION THROUGH THE HIP JOINT (illustration see page 19)
- NS 45 · SECTION THROUGH THE HAND (illustration see page 19)
- NS 46 · SECTION THROUGH THE ELBOW (illustration see page 19)
- NS 47 · SECTION THROUGH
 A NORMAL FOOT
 (illustration see page 19)
- NS 48 · SECTION THROUGH
 THE SHOULDER JOINT
 (illustration see page 19)





Sectional views of joints from series NS 43 - NS 48, made from SOMSO®-Plast. Bone sections modelled true to nature with topography of muscles, ligaments, vessels and nerves. Each with explanation on a green base. Under removable transparent cover.

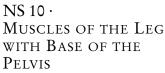


NS 20 · HIP JOINT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a green base. Height 28 cm, width 18 cm, depth 18 cm, weight 600 g

NS 19 · KNEE JOINT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a green base. Height 24 cm, width 12 cm, depth 14 cm, weight 300 g



Slightly smaller than natural size, made from SOMSO®-Plast. Separates into 10 parts. On a stand with green base, can be rotated. Height 108 cm, width 39 cm, depth 26 cm, weight 5 kg

NS 21 · Ankle Joints with LIGAMENTS

Natural size, made from SOMSO®-Plast. Consisting of the bones of the foot and the lower part of the lower leg with ligamentous apparatus. Cannot be disassembled, on a stand with green base. Height 38 cm, width 18 cm, depth 18 cm, weight 400 g

NS $1 \cdot$ NORMAL FOOT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. Height 13 cm, width 26 cm, depth 10 cm, weight 450 g









NS 51 · FUNCTIONAL Model of the HIP JOINT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base (removable). Height 35 cm, width 20 cm, depth 18 cm, weight 1.25 kg

NS 50 · FUNCTIONAL Model of the KNEE JOINT

NS 51

 (\mathbf{F})

NS 50

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a green base (removable). Height 34 cm, width 18 cm, depth 18 cm, weight 1 kg

NS 54 · Functional Model of the Joints OF THE FOOT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base (removable). Height 25 cm, width 28 cm, depth 18 cm, weight 900 g

NS 9 · Muscles of the Foot

Natural size, made from SOMSO®-Plast. Showing the nerve and vascular supply. The layers of the muscles of the sole of the foot are removable (flexor digitorum brevis muscle, quadratus plantae muscle, extensor digitorum longus muscle, tendo calcaneus (Achilles tendon), abductor digiti minimi muscle, flexor hallucis brevis muscle, adductor hallucis muscle (oblique head), and abductor hallucis muscle The ligamentous apparatus is shown. 9 parts in total. On a stand with green base. Height 18 cm, width 3 cm, depth 18 cm, weight 1.1 kg

NS 2 · FLAT FOOT

Natural size, made from SOMSO®-Plast. Cannot be disassembled. Height 13 cm, width 26 cm, depth 9 cm, weight 450 g















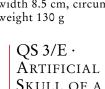
QS 3/3 · ARTIFICIAL SKULL OF A FETUS

Natural cast, made from SOMSO®-Plast. Cannot be disassembled. Length 10.5 cm, width 8.5 cm, circumference 29.7 cm, weight 130 g



ARTIFICIAL SKULL OF A Newborn

Natural cast, made from SOMSO®-Plast, 2 parts. Weight *QS 3/E Fontanelle Detail* 170 g



QS 3/2-E

QS 3/2-E · Artificial SKULL OF CHILD (ABOUT 6-YEARS OLD)

Natural cast, made from SOMSO®-Plast. 2 parts in total. Weight 380 g



QS 1 · Artificial Human Skull

Natural cast, made from SOMSO®-Plast. With closed cranium, movable lower jaw. Separates into 2 parts. Weight 700 g



QS $7/E \cdot Artificial$ Human Skull

Natural cast, made from SOMSO®-Plast, cranium can be removed, movable lower jaw, separates into 3 parts. Weight 800 g



QS 7 · Artificial Human Skull

Male, natural cast, made from SOMSO®-Plast, cranium can be removed, movable lower jaw, separates into 3 parts. Weight 800 g



QS 7/1 · Artificial Human Skull

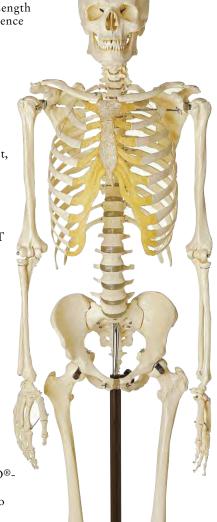
(Detail-Illustration) Natural cast, made from SOMSO®-Plast.

Same specification as QS 7, but with numbering, separates into 3 parts. Weight 800 g



Detail QS 7/1 – Numbering

QS $10/1 \cdot Artificial$ Human Skeleton



Maximum cranium circumference: ♀ 50.8 cm ♂ 51.2 cm



Cranium length (Glabella Ophistocranion line): ♀ 18.3 cm ♂ 17.5 cm Cranium width (Euryon distance): ♀ 12.8 cm ♂ 14.1 cm

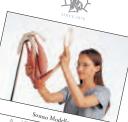


Hand skeleton length (Stylion-Dactylion III): ♀ 18 cm ♂ 19 cm.

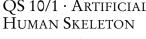


Foot skeleton length (Pternion-Acropodion): ♀ 22.2 cm ♂ 25 cm

SOMSO® offers a comprehensive range of Artificial Bone Models. If you would like details of these models please ask for the Catalogue A 79/4



Extremities and Joints



Natural cast of a male adult skeleton, made from SOMSO®-Plast. Mounted on stand with castors, with dust cover. Height 180 cm (skeleton 170 cm), width 55 cm, depth 55 cm, weight 10.4 kg



Artificial Bone Models



Interesting facts about SOMSO® skeletons: -

QS 10/1

Size and dimensions comply with the Central European average

Robust stand on five castors Availability of spare parts guaranteed even after years



QS 9 · ARTIFICIAL BAUCHENE Skull of an Adult

Natural size, made from SOMSO®-Plast. Separates into 16 parts. On a stand with green base. Height 40 cm, width 26 cm, depth 39 cm, weight 1.9 kg



Detail: Tympanic membrane with malleus and incus



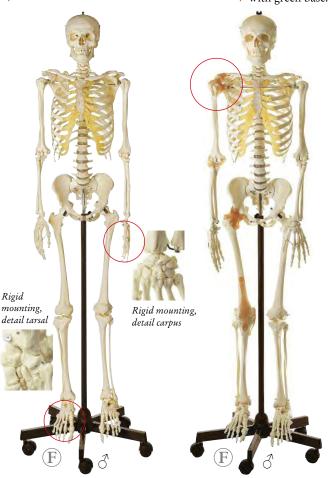
QS 8/53 · Artificial Temporal Bone

Natural cast, made from SOMSO®- Plast. The opened tympanic cavity shows the tympanic membrane, the three auditory ossicles, the cochlea, and the semicircular canals. Separates into 2 parts. On a stand with green base. Weight 800 g



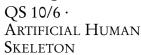
QS 8/3 · 14-Part Coloured Model OF THE HUMAN SKULL

Natural size, made from SOMSO®-Plast. After Prof. Dr. med. Dr. med. h.c. J. W. Rohen, Anatomical Institute of the University of Erlangen. Weight 700 g

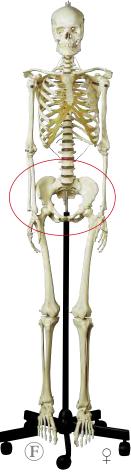


QS 10/E · ARTIFICIAL HUMAN SKELETON

Natural cast of a male adult skeleton, made from SOMSO®-Plast. Simplified mounting. Mounted on stand with castors, with dust cover. Height 179 cm (skeleton 170 cm), width 55 cm, depth 55 cm, weight 10 kg



As QS 10/1 (on page 20) but showing the ligaments on the knee, the hip, the elbow, and on the shoulder. Weight 11.2 kg



QS 10/8 · ARTIFICIAL HUMAN SKELETON

Natural cast of a female adult skeleton, made from SOMSO®-Plast. Mounted on stand with castors, with dust cover. Height 181 cm (skeleton 171 cm), width 55 cm, depth 55 cm, weight 10.7 kg



ARTIFICIAL HUMAN SKELETON

As QS 10/1 (on page 20) but the points of origin and attachment of the most important muscles from head to toe are marked in colour on the right side of the body. The individual bones are numbered on the left half. Weight 10.4 kg





Detail QS 10/8 - Dimensions of the pelvis

- 1 Linea terminalis circumference 37.9 cm
- Conjugata vera 11 cm
- 3 Diameter transversa 13.2 cm
- 4 Diameter obliqua 12.2 cm 5 - Conjugata diagonalis 12 cm



Detail QS 10/9 -Muscle attachments and origins in the area of the iliac wing and the forearm







QS 23 \cdot Skeleton of the FOOT (FLEXIBLE MOUNTING)

Natural size, made from SOMSO®-Plast. With distal ends of tibia and fibula. Flexibly mounted to show the change in position of the bones with a spread or flat foot. With numbering. Weight 440 g

OS 31/7 · Hand Skeleton with FOREARM CONNECTION (FLEXIBLE MOUNTING)

Natural size, made from SOMSO®-Plast. Flexibly mounted, to show the change in position of the bones of the hand. With numbering. Weight 165 g



OS 68/3 · CENTRAL AND Dorsolateral HERNIA OF INTER-VERTEBRAL DISC

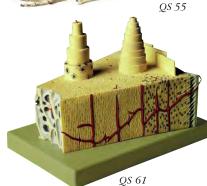
Natural size, made from SOMSO®-Plast. Separates into 5 parts, intervertebral discs can be replaced. On a transparent base. Height 13 cm, width 14 cm, depth 15 cm,





OF MUSCLES IN THE UPPER ARM Natural size, made from SOMSO®-Plast. Flexibly mounted. Schematic representation of the upper arm muscle. Made from flexible material. Without stand and base. Weight 740 g

MOVEMENTS



QS 61 · CONSTRUCTION OF BONE

Enlarged many times, made from SOMŠO®-Plast. Shown in a wedge segment from the compact part of a hollow bone. Cannot be disassembled. On a green base. Height 28 cm, width 39 cm, depth 26 cm, weight 2.82 kg

QS 55/2 · MOVEMENT OF MUSCLES IN THE UPPER ARM AND FOREARM

Natural size, made from SOMSO®-Plast. Showing the flexor and extensor of the upper arm as well as the rotator muscles of the forearm. On a stand with green base. Height 83 cm, width 45 cm, depth 26 cm, weight 2 kg

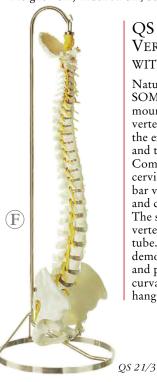
OS 54 QS 54 · COLLECTION CASE Vertebrae and Spinal Cord

Natural size, made from SOMSO®-Plast. Comprising: 1. Cervical vertebra with spinal cord and nerve endings, with explanation, 2. Cervical vertebra, 3. Thoracic vertebra, 4. Atlas, 5. Axis, 6. Lumbar vertebra, 7. Intervertebral disc. In a transparent, protective box with compartments, can be removed from the green base. Height 7 cm, width 32 cm, depth 18.5 cm, weight 800 g



OS 21/3 · Vertebral Column WITH PELVIS

Natural size, made from SOMSO®-Plast. Flexibly mounted, showing the arteria vertebralis, the spinal cord, the exiting spinal nerves, and the appendant ganglia. Comprising occipital bone; cervical, thoracic, and lumbar vertebrae; sacral bone and coccyx; iliac wings. The spinal cord is inside the vertebral canal as a flexible tube. Ideally suited for the demonstration of healthy and pathological spinal curvature. With stand for hanging. Weight 3.6 kg



SOMSO® vertebral columns can be used to

- 1. Normal back
- 2. Flat back
- 3. Hollow round back
- 4. Round back

S 1 \cdot Reconstruction of a SKULL OF PARANTHROPUS **BOISEI**

Age: approx. 1.8 million years, lower Pleistocene. 2 parts. Weight 870 g

S 2 · RECONSTRUCTION OF A SKULL OF HOMO ERECTUS

Age: approx. 1 million years, upper Pliocene. Separates into 2 parts. Weight 750 g

S 2/3733 · RECONSTRUC-TION OF A SKULL OF Homo ergaster (KNM-ER 3733)

Age: approx. 1.8 million years, upper Pliocene. 2 parts. Weight 590 g

 S_2/F .

RECONSTRUCTION OF A THIGH OF HOMO ERECTUS (TRINIL 3)

S 4 Homo

Homo habilis

Age: approx. 800.000 years, lower-mid Pliocene. Cannot be disassembled. Weight 570 g



S 8 Homo rudolfensis

> S 5/STs14 Australopithecus africanus

> > S 6 · LOWER **JAW FROM**

Australopithecus

africanús

S 2/KNM ·

 $S3 \cdot$

OF HOMO ERECTUS

RECONSTRUCTION OF A THIGH

Age: approx. 300.000 years, mid Pliocene.

RECONSTRUCTION OF A SKULL

OF HOMO NEANDERTHALENSIS

middle-upper Pleistocene (Würm glacial

Age: approx. 40.000 to 70.000 years,

stage). 2 parts. Weight 850g

S 3 Ното

S 3/F Homo neander

S 2/3733 Homo ergaster

thalensis

S 11 Homo steinheimensis neanderthalensis

Cannot be disassembled. Weight 890 g

MAUER NEAR HEIDELBERG, HOMO HEIDELBERGENSIS

Age: approx. 500.000 to 600.000 years, middle Pleistocene. Cannot be disassembled, with a green base. Weight 510 g

S 7 · RECONSTRUCTION OF A SKULL OF AUSTRALOPITHECUS

Age: 3.6 - 3.0 million years, upper Pliocene, 2 parts. Weight 620 g

S $3/1 \cdot RECONSTRUCTION OF$ A SKULL OF HOMO HABILIS (O.H. 24)

Age: approx. 1.85 million years, Pliocene. 2 parts. Weight 420 g

S 3/F · RECONSTRUCTION OF A THIGH OF

Homo neanderthalensis Age: approx. 40.000 - 50.000 years. Cannot be disassembled. Weight 700 g

S 4 · RECONSTRUCTION OF A SKULL OF HOMO SAPIENS Age: upper upper Pleistocene, approx.

25.000 years. 2 parts. Weight 830 g

S 5 · RECONSTRUCTION OF A SKULL OF AUSTRALOPITHECUS **AFRICANUS**

> Age: approx. 2.3 to 2.8 million years, lower Pliocene. 2 parts. Weight 540 g

S 2/F Homo erectus (Trinil 3)



S 1 Paranthropus boisei

Paranthropus æthiopicus

S 8 \cdot Reconstruction of a SKULL OF HOMO RUDOLFENSIS

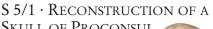
Age: approx. 2.5 - 1.9 million years, upper Pliocene. 2 parts. Weight 760 g

S 10 · RECONSTRUCTION OF A SKULL OF PARANTHROPUS **AETHIOPICUS**

Age: approx. 2.6 to 2.3 million years. Cannot be disassembled, with a green base. Weight 1,2 kg

 $S 11 \cdot SKULL OF THE$ STEINHEIM PREHISTORIC MAN, Homo steinheimensis

Age: approx. 250.000 years. Cannot be disassembled. Weight 530 g



SKULL OF PROCONSUL **AFRICANUS**

Age: approx. 20 million years, early Miocene. 2 parts. Weight 210 g

Proconsul africanus

S 5/STs14 · RECONSTRUCTION OF A PELVIS OF Australopithecus africanus

Age: approx. 2.2 - 2.8 million years. Cannot be disassembled. Weight 560 g

Anatomy

DOCUMENTATION OF HUMAN PHYLOGENY

In co-operation with the Institute for Anthropology at the University of Göttingen and Professor Dr. Uwe Hoßfeld, Research Group Didactics of Biology of the Friedrich Schiller University of Jena. Made from SOMSO®-Plast.

Homo erectus

Australo-

pithecus

afarensis

S 2/KMN

Homo erectus

INTRODUCTION TO ZOOLOGY:

Vertebrates Invertebrates Development of Animals Animal Cell, Genetics Comparative Anatomy Realistic Animal Models

SOMSO® Zoology Models are categorized mainly by system.

ZoS 27 Left half of the

model (muscles)



ZoS 27/1 Right half of the model (skeletal system)

ZoS 27 Right half of the model (skin)

ZoS 27/1 · DOMESTIC CAT Model.

Natural size, made from SOMSO®-Plast. The right half shows the skeletal system and the internal view of the median section of the body. The superficial skeletal muscles are displayed on the left half of the body. Separates into two halves medially. The following visceral organs can be removed: lung, heart, liver, stomach, small intestine with spleen, large intestine with kidney and the female sexual organs, tail. Separates into 9 parts in total, on a green pullout base. Height 43 cm, width 52 cm, depth 21 cm, weight 5.2 kg

> Left half of the model (muscles)

ZoS 27 · DOMESTIC CAT Model

Natural size, made from SOMSO®-Plast.. The right half shows the skin and the internal view shows the section of the head as well as the three large body cavities. The superficial skeletal muscles are displayed on the left half of the body. Separates into two halves medially. The following visceral organs can be removed: right lung, heart, liver, stomach, small intestine with spleen and large intestine with kidney and the female sexual organs. Separates into 8 parts in total. On a green pull-out base. Height 43 cm, width 52 cm, depth 21 cm, weight 5.7 kg



ZoS 27/1 - Right half of the model (skeletal system)

Developed in co-operation with Prof. Dr. Helmut Waibl and Dr. Elisabeth Engelke of the Institute of Anatomy at the University of Veterinary Medicine, Hanover.

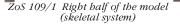
ZoS 109/1 ·

Model of a Female German Shepherd Dog

2/3 natural size, made from SOMSO®-Plast. The right side shows the skeletal system and the left half of the model shows the muscles. 11 parts, which can be disassembled as follows: half of the skull with vertebral column, thorax and iliac wing, tail, front leg, hind leg, right lung, heart, stomach, liver with right kidney, small intestine with duodenum and pancreas, large intestine with the female sexual organs, on a green base. Height 66 cm, width 80 cm, depth 25 cm, weight 10 kg



ZoS 109/1 disassembled













ZoS 26 · Domestic Hen

Natural size, made from SOMSO®-Plast. 5 parts, which can be disassembled as follows: body, topography of the muscles, lung, liver and stomach. On a green base with stand. Height 49 cm, width 45 cm, depth 26 cm, weight 2.4 kg

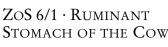




ZoS 17 · Cow Hoof

Natural size, made from SOMSO®-Plast. Cast of a natural, prepared left front cow hoof. Separates into 6 parts. On a green base. Height 34 cm, width 14 cm, depth 30 cm, weight 1.3 kg





ZoS 26

1/3 natural size, made from SOMSO®-Plast. Rumen and reticulum separate into 2 halves vertically and show the relief of the stomach lining; omasum and abomasum can be opened. Separates into 3 parts. On a stand with green base. Height 35 cm, width 28 cm, depth 18 cm, weight 1.7 kg



European Adder, Vipera b. berus (Linné). Scale: 15:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. Cannot be disassembled, on a stand with green base. Height 39 cm, width 49 cm, depth 26 cm, weight 1.7 kg





ZoS 42/43 · Horse Hoof with LIGAMENTOUS APPARATUS, Vessels and Nerves.

Natural size, made from SOMSO®-Plast. Developed in co-operation with Prof. Dr. Helmut Waibl and Dr. Elisabeth Engelke of the Institute of Anatomy at the University of Veterinary Medicine, Hanover. Separates into 7 parts. On a removable green base. Height 30 cm, width 18 cm, depth 26 cm, weight 1.57 kg



In the past also called er frog" - harmonisation water frog" - harmonisa of trivial names



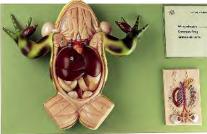


Pelophylax kl. esculentus (synonym: Rana kl. esculenta). After Christian Groß, Director of Studies. Scale: 4:1, made from SOMSO®-Plast. Separates into 3 parts. On a green base. Height 39 cm, width 62 cm, depth 12 cm, weight 3.9 kg



ZoS 105 · Anatomy of a Bony Fish

Taking the carp, Cyprinus carpio, as an example. Natural size, made from SOMSO®-Plast. Separates into 4 parts. On a stand with green base. Height 35 cm, width 49 cm, depth 15 cm, weight 1.6 kg









Opened abdominal cavity





INVERTEBRATES -

selection of representatives of the following simplified animal phylum classification, in descending level of order:

ECHINODERMS

Molluscs

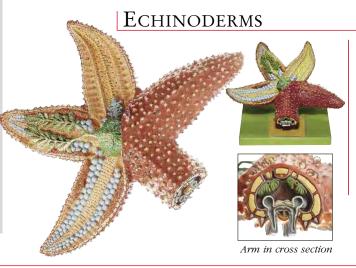
ARTHROPODS

Worms

Coelenterates

PROTOZOANS

Molluscs



ZoS 114 · COMMON STARFISH

Asterias rubens. Scale approx.: 3:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. 3 parts in total. On a stand with green base. Height 31 cm, width 53 cm, depth 35 cm, weight 2.2 kg



ZoS 119 · SWAN MUSSEL

Anodonta cygnea, anatomical overview, right half of shell, of the pallium, and the gill

removed, foot opened at the right side. Scale: 4:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. On a green base. Separates into 7 parts. Height 21 cm, width 61 cm, depth 38 cm, weight 7.7 kg

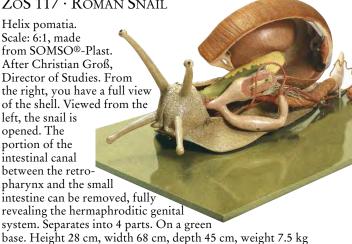
ZoS 117 · Roman Snail

Helix pomatia. Scale: 6:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. From the right, you have a full view of the shell. Viewed from the left, the snail is opened. The portion of the

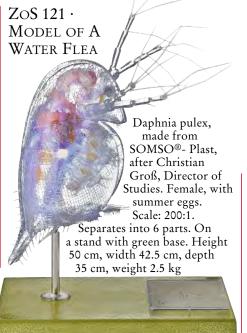
between the retropharynx and the small intestine can be removed, fully

intestinal canal

revealing the hermaphroditic genital system. Separates into 4 parts. On a green



ARTHROPODS / Crustaceans





Astacus astacus, body structure and anatomy of a male crayfish. Scale: 3:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. The realistically designed model

shows the differentiated outer extremities on the left side and the internal structure of the crayfish on the right side. Separates into 14 parts. On a stand with green base. Height 28 cm, width 82 cm, depth 29 cm, weight 4 kg



Disassembled viscera organs: Thorac limbs with and midgut

with rectum

Right ovary with

Right body shell



ARTHROPODS / Arachnids



ZoS 122 · Tick



Detail of the adhesive pads and claws

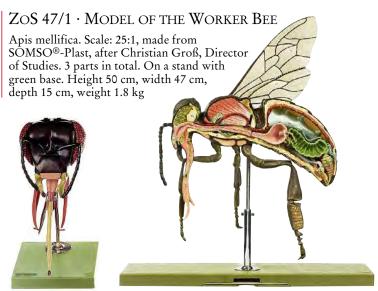


Detail of the capitulum from underneath



Sheep tick, lxodes ricinus, female. Scale: 70:1. Developed in co-operation with Christian Groß, Director of Studies, made from SOMSO®-Plast. The model is 28 cm long, 6 cm high, 23 cm wide, and weighs 0.222 kg. Cannot

ARTHROPODS / Insects



ZoS 48/1

ZoS 47/1

ZoS $48/1 \cdot$ Head of a Bee

Apis mellifica. Scale: 50:1. After Dr. E. Schicha, made from SOMSO®-Plast. Separates into 2 parts. On a stand with green base. Height 34 cm, width 18 cm, depth 19 cm, weight 0.8 kg

ZoS 49/31 · Common Housefly

Musca domestica. After Dr. E. Schicha, made from SOMSO®-Plast. The enlarged model on a scale of approx. 30:1 is 23 cm long, 22 cm high, 26 cm wide, and weighs 0.5 kg. Separates into 3 parts. On a stand with green base.



ZoS 48/4 · Head of a Fly

Musca domestica. Scale: 50:1 after Dr. E. Schicha. Cannot be disassembled. On a stand with green base. Height 27 cm. width 18 cm, depth 20 cm, weight 0,7 kg



ZoS 49 · Ommateum or

COMPOUND EYE

be disassembled. Under transparent cover on removable green base.

Enlarged approximately 200 times, made from SOMSO®-Plast. Showing the histological fine structure. Cannot be disassembled. On a stand with green base. Height 33 cm, width 29 cm, depth 18 cm, weight 0.9 kg



ZoS 47/5 · Bark Beetle

Scale: 40:1, made from SOMSO®-Plast. Appraised by Christian Groß, Director of Studies. Enlarged and true-to-detail representation of the typographer beetle (eighttoothed spruce bark beetle, Ips typographus L.). On a stand with green





ZoS 47/2 · Model of the Hind Legs of a Bee

Functional model, after Dr. E. Schicha, enlarged many times over, made from SOMSO®-Plast. The model is particularly well suited to illustrate the following functions: brushing off the bee's body with the combs, collecting the pollen in the corbicula at the outside of the tibia, movable joint between tibia and planta. On a stand with green base. Height 34 cm, width 18 cm, depth 18 cm, weight 1 kg



The world of insects - a series of small insect models which clearly demonstrates comparative morphology and physiology of insects











ARTHROPODS / Insects

ZoS 48/5 · Model of a Mosquito

Common house mosquito, Culex pipiens. Scale: 50:1, made from SOMSO®-Plast. After Dr. E. Schicha. Separates into 5 parts. On green pullout base to show the internal organs. Height 60 cm, width 75 cm, depth





ZoS 48/5

on a stand with green base. Height 25 cm, width 53 cm,

ZoS 107 ·

ZoS 48/3 · HEAD OF A MOSQUITO

Culex pipiens, head of a female mosquito. Scale: 80:1 . After Dr. E. Schicha, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. Height 40 cm, width 18 cm, depth 45 cm, weight 0.8 kg



Worms





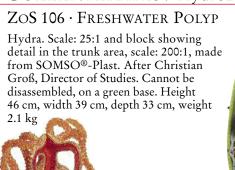
depth 14 cm, weight 2.2 kg

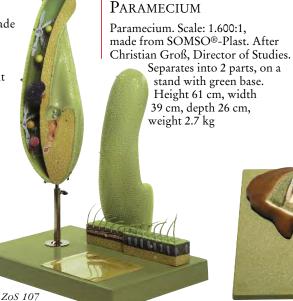
Comparison of the pork tapeworm (Taenia solium) and the beef tapeworm (Taenia saginata), enlarged many times over, made from SOMSO®-Plast. After Christian Groß, Director of Studies. Cannot be disassembled, on a green base, with description. Height 38 cm, width 61 cm, depth 10 cm, weight 3.1 kg

disassembled

ZoS 116/3 · Model Board of the Tape Worm

COELENTERATES / Hydrozoans, PROTOZOANS / Ciliates, Rhizopods





ZoS 101 · Амоева

Amoeba proteus. Scale: 1.000:1, after Prof. Dr. M. Lindauer and Christian Groß, Director of Studies. Made from SOMSO®-Plast. On a green base. Separates into 2 parts. Height 8 cm, width 48 cm, depth 31 cm, weight 1.8 kg

ZoS 108

disassembled



ZoS 101 disassembled

Zoology

ZoS 101/1 · Planktonic Foraminifera

ZoS 101/1

ZoS 106



ZoS 57/2 · Meiosis

As a component of reduction divisions, shown by 8 models with 2 explanatory introductory models, enlarged many times over, made from SOMSO®-Plast. After Christian Groß, Director of Studies. Cannot be disassembled. Individually mounted on a stand with green base. Weight 3.3 kg

ZoS 57/4 · Chromosome Model

Scale: 50.000:1, made from SOMSO®-Plast.
Developed in co-operation with Christian Groß,
Director of Studies. Can not be disassembled,
on a green stand with base. Height 46 cm,
width 18 cm, depth
18 cm, weight 1.4 kg

ZoS 57/1 · Mitosis

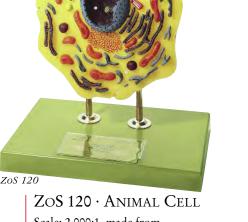
After Christian Groß, Director of Studies. Enlarged many times over, made from SOMSO®-Plast. The series consists of 8 individual models. Cannot be disassembled. Each model on an individual stand with green base. Weight 7.1 kg

ZoS 110/1 · Animal Cell

Scale: 10.000:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. Cannot be disassembled, on a stand with green base. Height of the model 22 cm, total height 37 cm, width 18 cm, depth 18 cm, weight 1 kg

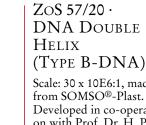
ZoS 57/3 · Change of Nuclear Phases in the Maturation of Sperm and Ovum (Meiosis)

Enlarged many times over. After Christian Groß, Director of Studies, made from SOMSO®-Plast. Chromosomes of paternal and maternal origin as well as gonosomes (can be exchanged in diploid phase) are shown in different colours. The series consists of 5 individual models. Individually mounted on a stand with green base. Weight 2 kg

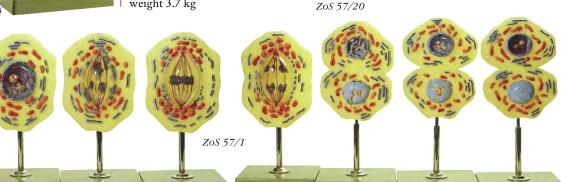


ZoS 110/1

Scale: 2.000:1, made from SOMSO®-Plast. After Christian Groß, Director of Studies. The model shows the fine structure of an animal cell. Area of application: Extended cell examination. Cannot be disassembled, on a stand with green base. Height 52 cm, width 39 cm, depth 26 cm, weight 3.7 kg



Scale: 30 x 10E6:1, made from SOMSO®-Plast. Developed in co-operation with Prof. Dr. H. P. Jennissen, Dr. M. Laub, and Prof. Dr. G. Witt. In one piece, can be rotated on a green base. Based on data gained from X-ray structure analysis, the model shows a section of a DNA double helix. It complies essentially with the model of the DNA structure postulated by Watson and Crick in 1953. Height 41.5 cm, width 18 cm, depth 18 cm, weight 0.995 kg



Zoology

ZoS 57 · Cell Division



ZoS 58

ZoS 58 · EQUAL CLEAVAGE AND GASTRULATION IN THE LANCELET

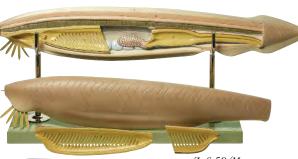
Branchiostoma lanceolatum, Lancelet. Scale approx.: 500:1, made from SOMSO®-Plast. Represented on 9 models on stand with green base, showing the different stages of cleavage, formation of blastula and primitive gut. Cannot be disassembled. Weight 1.9 kg

ZoS 103 · Reproduction OF A CHICKEN EGG

Linearly enlarged 6.5 times. Made from SOMSO®-Plast, after Christian Groß, Director of Studies. Cannot be disassembled, on a stand with green base and explanation. Height 43 cm, width 39 cm, depth 26 cm, weight 3.5 kg

ZoS 59/N · LANCELET CROSS SECTION

through the branchia and middle intestine region of a fully-grown lancelet, Branchiostoma lanceolatum. Scale approx.: 150:1, made from SOMSO®-Plast. Cannot be disassembled, on a stand with green base. Height 20 cm, width 12 cm, depth 12 cm, weight 0.5 kg



ZoS 59/M

$ZoS 59/M \cdot$ LANCELET

Branchiostoma lanceolatum, scale approx. 150:1, made from SOMSO®-Plast. The three-part model shows the structure of the body of a fully-grown specimen: fin edges, muscle segments, position of the gonads, the nervous system, the chorda, intestine, and vascular system. On a stand with green base. Height 25 cm, width 68 cm, depth 14 cm, weight 3 kg

ZoS 103/1 ·

ZoS 59/N

Blastodisc of a Fertilised but non-incubated Chicken Egg

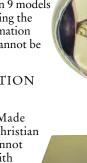
Chicken Embryo after approx. 20 hours of incubation

ZoS 103/3 ·

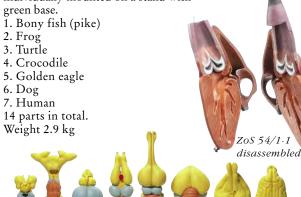
Chicken Embryo after approx. 33 hours of incubation

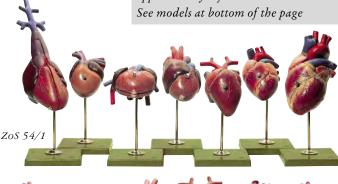
Chicken Embryo after approx. 50 hours of incubation

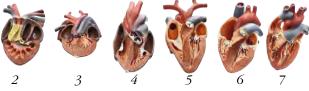
ZoS 103/5 · Chicken Embryo after approx. 4 days of incubation











Internal view of models ZOS 54/1 numbers 2 – 7

${ m ZoS}\, { m 55}\cdot { m Models}$ of Vertebrate Brains

Made from SOMSO®-Plast. The series consists of the following 8 models (some enlarged many times over): 1. River lamprey. 2. Dog fish. 3. Trout. 4. Frog., 5. Alligator., 6. Dove., 7. Rabbit, and 8. Dog. Cannot be disassembled. Each model on an individual stand with green base. Weight 1.6 kg

ZoS 55

30













ZoS 53 · Chimpanzee Skull

Pan tr. troglodytes (Blumenbach 1799), male, natural size. Made from SOMSO®-Plast. Lower jaw movable and can be removed. Weight 0.42 kg

ZoS 53/1 · Chimpanzee Skull, Iuvenile

Pan tr. troglodytes (Blumenbach 1799), natural size. Made from SOMSO®-Plast, lower jaw movable and can be removed. Weight 0.16 kg

ZoS 50 · Gorilla Skull

Gorilla g. gorilla (Savage u. Wyman 1847), male, natural size. Made from SOMSO®-Plast, lower jaw movable and can be removed. Weight 1.07 kg

ZoS 53/3 · Baboon Skull

Papio anubis, male, natural size, made from SOMSO®-Plast. Lower jaw movable and can be removed. Weight 0.355 kg

ZoS 52 ·

Orangutan Skull

Pongo p. pygmaeus (Hoppins 1763), male, natural size, made from SOMSO®-Plast, lower jaw movable and can be removed. Weight 0.56 kg

ZoS 52





Pan tr. troglodytes, male, natural size, made from SOMSO®-Plast, consists of 3 parts. Cranium can be removed, lower jaw movable and can be removed. Weight 0.607 kg

ZoS 53/2 · Chimpanzee Skull

Pan tr. troglodytes, female, natural size, made from SOMSO®-Plast. Lower jaw movable and can be removed. Weight 0.5 kg

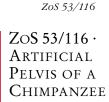
ZoS 53/122 · Artificial Foot Skeleton of a Chimpanzee

Natural size, made from SOMSO®-Plast, weight 0.120 kg.

ZoS 53/110 ·

ARTIFICIAL SKELETON OF A CHIMPANZEE

Pan tr. troglodytes, skeleton of a male chimpanzee, natural size, made from SOMSO®-Plast. Age: approx. 12 years. On a stand with green base. Height 90 cm, width 82 cm, depth 40 cm, weight 10.3 kg



Natural size, made from SOMSO®-Plast, weight 0.640 kg.



ZoS 53/122

ZoS 53/131 ·
Artificial Hand
Skeleton of a
Chimpanzee

Natural size, made from SOMSO®-Plast, weight 0.107 kg.



The series of skull reproductions is based on a co-operation with The Bavarian State Collection of Zoology in Munich.



ZoS 53/20 · Beaver Skull

Castor fiber (LINNE, 1758). Natural size, made from SOMSO®-Plast. Lower jaw movable and can be removed. Weight 0.3 kg



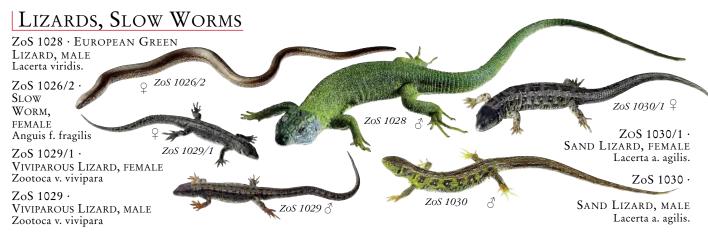
ZOOLOGY

Models

REALISTIC ANIMAL

All animal models are reproduced to be lifelike down to the smallest detail and are painted minutely and accurately on the undersides as well. The structures and surface are true representations of the originals.





Snakes, Turtles and Tortoises, Snails and Slugs, Neozoans





COMMON NOCTU

ZoS 1252/1

Zos 1250/3 Zos 1252/2

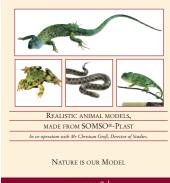
ZoS 1252/1 ·
Dyeing Poison Dart Frog,
FEMALE, "REGINA"
Dendrobates tinctorius

ZoS 1252/2 · BLUE POISON DART FROG, FEMALE Dendrobates tinctorius "azureus"



Mr Manfred Eichler, Biological Model Maker from the SOMSO®-Painting Department, painting a realistic animal model. The range of the new model series of poison dart frogs comprises 31 species. If you are interested, please request the special catalogue A 75/SV-VII, which covers the complete programme of realistic animal models.





ZoS 1250/3 ·
GOLDEN POISON FROG, FEMALE,
"LA BREA" CREAM-COLOURED
Phyllobates terribilis



All models are supplied with a transparent dust cover, with the description printed on the green base.



Together with the Biological Model Makers Rudolf Galle and Manfred Eichler, Christian Groß, Director of Studies, compares a live specimen of the red variant of the fire salamander with the painted version of the SOMSO® model ZoS 1001/RV.

Introduction to Botany

Plant morphology Cryptogams Gymnosperms Monocotyledonous Plants (Monocotyledons) Dicotyledonous Plants (Dicotyledons) Microscopic Fungi, Fungi Models

SOMSO® Botanical Models are categorized mainly by plant system.



BoS 15/10 · Example of a not united Perianth of an Angiosperm Flower

Enlarged approximately 10 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Separates into 11 parts. On a green base. H. 54 cm, W. 39 cm, D. 37 cm, Wt 2.4 kg

CRYPTOGAMS

BoS 14/6 · Thyme Moss, Gameto-Phyte with Sporophyte

Mnium affine, enlarged approximately 12 times, consists of 6 parts, made from SOMSO®-Plast. The mature sporogonium with seta can be replaced with an immature sporogonium with seta, an antheridium or an archegonium. The calyptra on the mature sporogonium is detachable. On a stand with green base. H. 37 cm, W. 18 cm, D. 18 cm, Wt 0.7 kg

BoS 14/3-A · Common Liverwort

Marchantia polymorpha, enlarged approximately 10 times, made from SOMSO®-Plast. Separates into 5 parts. On a green base. H. 19 cm, W. 26 cm, D. 32 cm, Wt 1 kg

PLANT MORPHOLOGY



BoS $16/1 \cdot Plant$ Cell

Enlarged approx. 6.000 times, made from transparent SOMSO®-Plast with base. Cannot be disassembled. H. 36 cm, W. 31 cm, D. 27 cm, Wt 1.7 kg

BoS 16 · Plant Cell

Enlarged 3.000 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Showing the microscopical fine structure. On a green base. Cannot be disassembled. H. 7 cm, W. 32 cm, D. 19 cm, Wt 0.7 kg





BoS 16/2 · Chloroplast of a Higher Plant

Enlarged approximately 60.000 times, made from SOMSO®-Plast. Separates into 2 parts. On a stand with green base. H. 38 cm, W. 39 cm, D. 26 cm, Wt 3.2 kg

BOS 19 · FERTILISATION OF ANGIOSPERMS

Polygonum type, enlarged 300 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. On a green base. Cannot be disassembled. H. 66 cm, W. 30 cm, D. 14 cm, Wt: 3.3 kg



BoS 14/4-A · Field Horsetail

Equisetum arvense, fertile shoot, enlarged approximately 6 times, sporophyll with sporangia enlarged approximately 50 times, vegetative shoot enlarged approximately 3 times, made from SOMSO®-Plast. On a stand with green base. Cannot be disassembled. H. 35 cm, W. 33 cm, D. 15 cm, Wt 1 kg

BoS 14/5 · Worm Fern, Prothallium

Dryopteris filix-mas, enlarged approximately 45 times, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. H. 31 cm, W. 26 cm, D. 20 cm, Wt 900 g









Recommended additions to the models of cryptogams:
BoS 14/4 · Field Horsetail

BoS 14/5-A · Worm Fern,
Spore Formation



GYMNOSPERMS









BoS 21/2

BoS $15/30 \cdot Pine$, male

Pinus sylvestris, flower enlarged approximately 18 times, stamen enlarged approximately 90 times, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. H. 33 cm, W. 33 cm, D. 15 cm, Wt 0.7 kg

BoS $15/31 \cdot PINE$, FEMALE

Pinus sylvestris, inflorescence enlarged approximately 20 times, seed scale with ovules and covering scale approximately 80 times, made from SOMSO®-Plast. On a stand with green base. H. 33 cm, W. 33 cm, D. enlarged 15 cm, Wt 1.0 kg

BoS 21 · Anatomical Fine Structure of Pinewood

Pinus sp., enlarged approximately 350 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Cannot be disassembled, on a green base. H. 15 cm, W. 65 cm, D. 30 cm, Wt 5.2 kg

BOS 21/2 · CONIFEROUS LEAF OF THE BLACK PINE (CROSS AND LONGITUDINAL SECTIONS) Pinus nigra, enlarged approximately 300 times, made from SOMSO®-Plast. Separates into 3 parts, on a green base. H. 12 cm, W. 39.5 cm, D. 28 cm, Wt 1.6 kg

MONOCOTYLEDONOUS PLANTS (MONOCOTYLEDONS)



BoS 15/3 · TULIP BULB

Tulipa gesneriana, enlarged approximately 5 times, made from SOMSO®-Plast. The model shows a longitudinal section of the structure of a sprouting tulip bulb. Separates into 3 parts, on a green base. H. 31 cm, W. 18 cm, D. 18 cm, Wt 680 g





BoS 15/2 · GARDEN TULIP, FLOWER

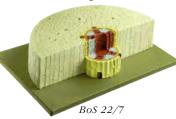
Tulipa gesneriana, enlarged approximately 4 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. One half of the corolla can be removed to show the stamens and the pistil. Separates into 3 parts. On a green base. H. 42 cm, W. 18 cm, D. 18 cm, Wt 1 kg

BoS $20/2 \cdot Root$ TIP OF A MONOCO-TYLEDONOUS PLANT IN LONGITUDINAL AND CROSS SECTION

Barley, Hordeum vulgare, enlarged approximately 200 times, made from SOMSO®-Plast. Cannot be disassembled, on a green base. H. 37 cm, W. 18.5 cm, D. 18.5 cm, Wt 1.5 kg

BoS $22/7 \cdot S$ HALLOT ROOT

Allium ascalonicum, enlarged approximately 350 times, made from SOMSO®-Plast. Cannot be disassembled, on a green base. H. 10.5 cm, W. 39 cm, D. 28 cm, Wt 1.8 kg



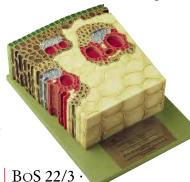


BoS 18 · Model of a Wheat GRAIN CROSS SECTION

An example of a caryopsis. Triticum aestivum L., enlarged approximately 75 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Separates into 2 parts, on a stand with green base. H. 43 cm, W. 52 cm, D. 26 cm, Wt 4.2 kg

BoS 15/5 · RYE SPIKELET

Secale cereale, enlarged approximately 25 times, made from SOMSO® Plast. After Prof. Dr. W. Jung. Separates into four parts. The grass spikelet model shows the typical structure of wind pollination On a stand with green base. H. 93 cm, W. 35 cm, D. 18 cm, Wt 0.8 kg



SECTION THROUGH THE PERIPHERAL PART OF A MONOCOTYLE STEM

Maize, Zea mays, enlarged approximately 550 times, made from SOMŚO®-Plast. After Prof. Dr. W. Jung. Cannot be disassembled, on a green base. H. 49 cm, W. 30 cm, D. 12 cm, Wt 2.8 kg



SOMSO® Botanical Models were mainly developed in close co-operation with Professor Dr. Wilhelm Weber († 2011).

DICOTYLEDONOUS PLANTS (DICOTYLEDONS)

BoS $1 \cdot$ APPLE BLOSSOM

Malus domestica, enlarged approximately 10 times. Made from SÓMSO®-Plast, after Prof. Dr. W. Jung. Separates into 6 parts. On a stand with green base. H. 41 cm, W. 48 cm, D. 45 cm, Wt 1.8 kg

BoS 2 · APPLE BLOSSOM -CROSS SECTION OF THE OVARY

Malus domestica, enlarged approximately 10 times. Made from SOMSO®-Plast, after Prof. Dr. W. Jung. Cannot be disassembled. On a stand with green base. H. 19 cm, W. 18 cm, D. 18 cm, Wt 370 g

BoS 3 · Apple Blossom -Longitudinal SECTION OF THE OVARY

Malus domestica, enlarged approximately 10 times. Made from SOMSO®-Plast, after Prof. Dr. W. Jung. Cannot be disassembled. On a stand with green base. H. 40 cm, W. 18 cm, D. 18 cm, Wt 620 g

BoS 15/20 · BUTTERCUP, FLOWER AND FRUIT

Meadow buttercup, Ranuculus acer, flower enlarged approximately 10 times, fruit enlarged approximately 20 times, made from SOMSO®-Plast. Cannot be disassembled. On a stand with green base. Flower: H. 34 cm, W. 26 cm, D. 26 cm, Wt 700 g. Fruit: H. 30 cm, W. 18 cm, D. 18 cm, Wt 600 g

BoS 15/1 · MEADOW CLARY

Salvia pratensis, enlarged approximately 15 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Cannot be disassembled, on a stand with green base. The forward-rocking mechanism of the stamens can be demonstrated. H. 36 cm, W. 33 cm, D. 18 cm, Wt 700 g

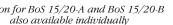








Caption for BoS 15/20-A and BoS 15/20-B







BoS 15/21 · CHERRY BLOSSOM

Sweet cherry, Prunus avium, enlarged approximately 9 times, made from SOMSO®-Plast. Separates into 3 parts. On a stand with green base. H. 33 cm, W. 31 cm, D. 31 cm, Wt 800 g

BoS 15/15 · PEA, FLOWER

Pisum sativum, enlarged approximately 9 times, made from SOMSO®-Plast. Separates into 3 parts. On a stand with green base. H. 40 cm, W. 23 cm, D. 26 cm, Wt 850 g

BoS 15/11 · RAPESEED FLOWER

Brassica napus, enlarged approximately 10 times, made from SOMSO®-Plast. Separates into 2 parts. On a stand with green base. H. 34 cm, W. 28 cm, D. 28 cm, Wt 700 g

BoS 15/19 · Dandelion, Inflorescence, Individual **BLOSSOM AND** FRUIT

Taraxacum officinale, enlarged approximately 8 times + 16 times, made from SOMSO®-Plast. On a green base. H. 35 cm, W. 33 cm, D. 18 cm, Wt 1.1 kg

BoS 15/6 · REAL CAMOMILE

Matricaria chamomilla. inflorescence (anthodium), enlarged approximately 9 times, made from SOMSO®-Plast. Ligulate flower enlarged 20 times, tubular flower enlarged 80 times. Cannot be disassembled. On a stand with green base. H. 33 cm, W. 38 cm, D. 12 cm, Wt 800 g

















DICOTYLEDONOUS PLANTS (DICOTYLEDONS)

BoS 15/7 · GERMINATION MODEL

A collection comparing the germination of rye (enlarged 10 times), bean (enlarged 5 times), and spruce (enlarged 20 times). Made from SOMSO®-Plast. After Prof. Dr. W. Jung. Separates into 8 parts. On a green base. H. 37 cm, W. 54 cm, D. 14 cm, Wt 3.7 kg

BoS 22 · OPEN COLLATERAL Vascular Bundle

of a Dicotyledonous Plant, enlarged approximately 550 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Cannot be disassembled. On a green base. H. 13 cm, W. 32 cm, D. 26 cm, Wt 1.4 kg

BoS 22/4-E ·

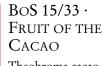
SECTION THROUGH THE WOOD (STEM) OF A ONE-YEAR-OLD DICOTYLEDONOUS PLANT

Small-leaved lime, Tilia cordata, slightly simplified, enlarged approximately 125 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung, revised in co-operation with Prof. Dr. Weber. On a green base. Cannot be disassembled. H. 20 cm, W. 37 cm, D. 25 cm, Wt 2.8 kg

BoS 21/1 ·

SECTION THROUGH A TWO-YEAR-OLD TWIG OF THE LIME TREE

Tilia sp., enlarged approximately 350 times, made from SOMSO®-Plast. After preparations and drawings made by Prof. Dr. W. Jung. Cannot be disassembled, on a green base. H. 18 cm, W. 65 cm, D. 30 cm, BoS 21/1 Wt 4.2 kg



Theobroma cacao. Natural size, made from SOMSO®-Plast. Separates into 7 parts. On a green base. H. 30 cm, W. 17.5 cm, D. 17.5 cm, Wt 2.0 kg

BoS 15/33 disassembled









BoS 22/4-E







BoS 17 · DECIDUOUS LEAF OF THE CHRISTMAS ROSE

Christmas rose, Helleborus niger, enlarged 700 times, made from SOMSO®-Plast. Cannot be disassembled. On a green base. H. 41 cm, W. 29 cm, D. 12 cm, Wt 2.8 kg



BoS 22/5-E · YOUNG ROOT OF THE MEADOW BUTTERCUP

Ranunculus acer, enlarged approximately 300 times, made from SOMSO®-Plast. After Prof. Dr. W. Jung. Cannot be disassembled, on a green base. H. 13 cm, W. 39.5 cm, D. 28 cm, Wt 2.3 kg



SECTION THROUGH THE PERIPHERAL PART OF THE STEM OF THE CREEPING BUTTERCUP

Ranunculus repens, enlarged approximately 450 times, made from SOMSO®-Plast. Cannot be disassembled, on a green base. H. 49 cm, W. 30 cm, D. 12 cm, Wt 2.8 kg

Professor Weber (†2011) together with Mrs Viola Speer, taking a look at the model of a Section Through the Stem of a One-year-old Lime Tree BoS 22/4-E. The majority of the SOMSO® Botanical Models have been developed in close co-operation with Professor Dr. W. Weber.







If interested, please request our 37 catalogue A 75/2+3, which provides information on the entire range of SOMSO® flower models.

MICROSCOPIC FUNGI, FUNGI MODELS



BoS 227 ·

STRUCTURE OF HAT FUNGI Large model. Appraised by Dr. rer. nat. Axel Meixner, Graduate Chemist and fungi expert, Stuttgart. Separates into 4 parts. Made from SOMSO®-Plast. On a green base. H. 45 cm, W. 40 cm, D. 35 cm (hat diameter 35 cm), Wt 5.4 kg



BoS 14/1 · Mucor

Mucor mucedo, enlarged approximately 250 times, made from SOMSO®-Plast. Separates into 3 parts. On a green base. H. 18.5 cm, W. 32 cm, D. 25.5 cm, Wt



Pinus sylvestris Piece of root, enlarged approximately 40 times, cross section enlarged approximately 430 times, made from SOMSO®-Plast. After Prof. Dr. W. Weber Separates into 2 parts, on a green base. H. 32 cm, W. 26 cm, D. 16.5 cm, Wt 1.5 kg **BoS 29 · Leccinum**



BoS 31

Fungi models are mounted on a green base with real moss



BoS 41 · FLY AGARIC

Amanita muscaria Poisonous



Edible

FIELD MUSHROOM Agaricus campestris Edible

AURANTIACUM

Leccinum aurantiacum

BoS 28 ·

CHANTERELLE,

Egg Mush-ROOM Cantharellus



BoS 29

BoS 227 complete

BoS 227

disassembled



BoS 43 · BAY BOLETUS

Xerocomus badius Edible

BoS 53 ·

Poisonous

Boletus satanas

DEVIL'S BOLETE

cibarius Edible

BoS 25 · BoS 26

DEATH

CAP Amanita phalloides Deadly poisonous and extremely dangerous!

BoS 45 · PARASOL

Mushroom Macrolepiota procera Edible

BoS 226 ·

DEVELOPMENT of Hat Fungi natural size, made from SOMSO-Plast®. Appraised by Dr. rer. nat. Axel

Meixner, Graduate Chemist and fungi expert, Stuttgart. Separates into 6 parts in total. On a green base. H. cm, W. 47 cm, D. 15 cm, Wt 2 kg

BoS 45

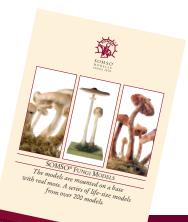


BoS 226



BoS 56

BoS 56 · COMMON EARTHBALL Scleroderma citrinum Poisonous





MARCUS SOMMER SOMSO® MODELLE GMBH

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