

You can feel “life” with the Robot



mikoto is a simulator for medical education with a realistic appearance, internal structure and biological reaction as if it has a feeling close to human beings that has never been before, being treated as actual human beings. Before intubation to the actual patient, by using **mikoto** which feels close to the human body feeling, sensation and reactions, it is possible to make the procedure more reliable by repeated training with tension and realism. By utilizing this product developed to meet the needs of medical education that emphasizes practice and medical safety, we aim to improve medical technology and realize more secure and safe medical treatment.



mikoto
medical simulator

mikoto

multi-task model
MT01-0

nasal / oral tracheal intubation

nasal / peroral endoscopy

sputum suction

Training three kinds of procedures with one robot



Position change between supine position and lateral position

[Size mm]
Robot / W 420 x L 1000 x H 260
Cart / W 620 x L 1000 x H 1550
[Material]
Skin / Silicone rubber



Interactive simulator closer to human beings

Three intubation procedures can be trained on one robot. Utilizing the robot, biological reaction by adding sensor to the pharyngeal posterior wall is possible. Also, objective evaluation of the procedure can be done after training.



endoscopy



tracheal intubation

Main features and functions by model

		multi-task model	single-task model
Reality	Reproduction of human appearance	●	●
	Reproduce the softness of the human body	●	●
	- Soft epidermis and soft inner shaping	●	●
	- Reproduce softness close to human under general anesthesia	●	●
	- Training of the procedure of artificial respiration (bag valve mask)	●	●
	Reproduction of anatomical internal structure and diversity	●	●
	- Reproduction of nasal concha, nasal septum and curvature inside nasal cavity	●	●
	- Burp (visual field securing) training by reproducing thyroid cartilage	●	●
Biological reaction	- Reproduction of intubation difficult cases (opening restriction, cervical vertebra restriction)	●	●
	- Tooth broken by laryngoscope	●	●
	- Visualization of trachea (single lung intubation and cuff position confirmation)	●	●
	Sensor installed	●	-
Evaluation	Speech utterance	●	-
	Objective evaluation by reactive strength of various sensors and time of procedure	●	-



soft epidermis



realistic inner shaping



biological reaction: blink and vomit

..... collaborative R&D

Tottori University Hospital × MICOTO Technology

In order to emphasize practice, realize medical safety, acquire skill of home treatment and evaluate equipment operation, we cooperated with Tottori University Simulation Center which conducts practical medical and nursing education, and other divisions such as Division of Anesthesiology and Critical Care Medicine, Division of Otolaryngology, Head and Neck Surgery and so on, and we developed a highly realistic medical education simulator that meets the specifications required in the medical field.



mikoto

single-task model
ST01-0

nasal / oral tracheal intubation

Exterior pursuing reality, internal shaping

[Size mm]
W 280 x L 500 x H 260
[Material]
Skin / Silicone rubber



Close to human beings

Model of tracheal intubation procedure derived from multitask model. It can be intubated with a sense close to human beings, and cases of people who are difficult to be intubated can also be trained. It also reproduces the softness of the jaw of a patient under general anesthesia.



tracheal intubation



bag valve mask