

Laboratory Clinical Genetics

Request form Biochemical Diagnostics

Postal address

Maastricht UMC+
Laboratory Clinical Genetics
PO Box 5800, 6202 AZ Maastricht
The Netherlands



Material delivery

Laboratory Clinical Genetics, Sample Reception
P. Debyelaan 25, 6229 HX Maastricht
North Building, 2nd floor, Route 14
The Netherlands

T: +31 43 3871345

E: cmo.klin.genetica@mumc.nl

W: klinischegenetica.mumc.nl

PATIENT DETAILS (REQUIRED TO FILL IN)

Initials and name _____
Date of birth _____ Gender M/ F Multiple birth _____
Address _____
Zip code and city _____
Country _____

PHYSICIAN DETAILS

Name _____
Hospital _____
Department _____
Address _____
Zip code and city _____
Country _____
Telephone _____
E-mail physician _____
E-mail secretariat _____
CC result to _____

Extern ref.no. _____

Informed consent

It must be indicated below whether the advice seeker DOES or DOES NOT grant permission for the use of their material/data for follow-up research within the same research question.

The material/data may be used for follow-up research if no cause is found during the current test.

A follow-up examination within the same research question can then be performed without a new request. For example, when a new gene/variant is discovered or a more accurate test becomes available. The requester will be informed. The laboratory will not submit a new bill. Any costs incurred via the treating physician fall under the deductible.

The material/data may **not** be used for follow-up research in line with the current research question.

Further use of the material/data has not (yet) been discussed.

► **URGENT REQUEST** via cmo.klin.genetica@mumc.nl.

Please check boxes of specimen of requested analyses

SPECIMEN TYPE	DATE OF SAMPLE	TIME	SIGNATURE
1 x 6 ml Li HEPARIN blood	_____	_____	_____
Urine	by _____ to _____	_____	_____
Liquor / CSF	_____	_____	_____
Other	_____	_____	_____

See page 4 for the correct collection, storage and shipping conditions.

To be completed only by Clinical Genetics Sample Reception employee

Material received in accordance with acceptance/shipping protocol	Yes	No	Date of receipt _____
BLOOD	SER/PLA	BM	
EDTA # _____	# _____	# _____	DNA
HEPARIN # _____	# _____	# _____	UMBILICAL CORD
SERUM # _____	# _____	# _____	FIBROBLASTS
URINE # _____ fractions	# _____ UP	# _____ UV	MUSCLE
LIQUOR # _____ fractions			STRECK (NIPT)
OTHERWISE: _____			
Quality indicator _____	Signature _____		

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Quantitative analyses *

Result turnaround time 2-3 weeks

Amino acids	6 ml Li HEPARIN blood / 5 ml urine / CSF / dried blood spot
Organic acids (incl. acylglycines)	5 ml urine
Purines and pyrimidines	5 ml urine / 6 ml Li HEPARIN blood
Very long chain fatty acids	6 ml Li HEPARIN blood
Sugar alcohols (incl. galactitol)	5 ml urine
Sugars	5 ml urine
Targeted Urine Metabolomics	5 ml urine
LysoGb3 (Biochemical screening for Fabry)	6 ml Li HEPARIN blood
Kidney stone screening	5 ml urine

* If multiple indications are checked for the same material type during the single analyses, the material only needs to be collected once.

Indications and questions

Result turnaround time 3-6 weeks

Biochemical screening for IEM¹ 1 x 6 ml **Li HEPARIN** blood and 15 ml urine

Fill in clinical specification below.

1 Our partner metabolic laboratory at Radboudumc in Nijmegen (Metabolic laboratory, Genome diagnostics) handles the technical execution of several analyses.

Specification of clinical data / medication / nutrition

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Clinical indications

I general physical characteristics

- 100-103 P 10 50 90 length
- 110-113 P 10 50 90 weight to height ratio
- 120-123 P 10 50 90 head circumference
- 130 abnormal appearance/dysmorphia*
- 131 hepatomegaly
- 132 splenomegaly
- 133 pre-/dysmature
- 134 edema
- 135 jaundice
- 136 abnormal blood pressure
- 137 hair abnormalities
- 138 skin abnormalities
- 139 eye abnormalities
- 140 deafness
- 141 body odor
- 142 (near)-SIDS/ALTE
- 143 tachypnea
- 144 hyperventilation
- 145 xanthomatose
- 146 hydrops
- 147 ascites
- 148 hypertension
- 149 hypotension
- 150 speech disorder
- 151 gait disturbance
- 152 extreme fatigue
- 154 exercise tolerance

II neurological/muscle abnormalities

- 200 intellectual disability
- 201 motor development delay
- 202 abnormal EEG/CT/MRI scan*
- 203 spasticity
- 204 hypertonia
- 205 convulsions/seizures/epilepsy*
- 206 abnormal eye movements
- 207 hypotension
- 209 ataxia/athetosis*
- 212 myoclonus
- 213 autism/solitary behavior*
- 214 cardiological problems*
- 215 dystonia
- 216 unexplained leukoencephalopathy
- 217 myopathy
- 218 muscular dystrophy
- 219 muscle weakness
- 220 inappropriate crying

- 221 psychosis
- 222 impulsive aggressive behavior
- 223 coma/decreased consciousness
- 224 lethargy
- 225 pyramidal syndrome
- 226 extrapyramidal syndrome
- 227 cerebellar syndrome
- 228 peripheral neuropathy
- 229 stroke

III gastrointestinal abnormalities

- 300 vomiting
- 301 diarrhea
- 302 oral aversion*
- 303 colic
- 304 delayed bowel transit
- 305 nutritional status*
- 306 growth disorder

IV nephrological abnormalities

- 400 nephrolithiasis
- 401 polyuria
- 402 abnormal urinary odor/color*
- 404 renal insufficiency
- 405 anuria

V radiological abnormalities

- 500 bone age delay
- 501 skeletal abnormalities
- 502 osteoporosis
- 503 rickets

VI immuno-/hematological abnormalities

- 600 recurrent infections
- 601 vaccination triggered symptoms
- 602 immunodeficiency
- 603 vascular abnormalities
- 604 hemolysis
- 605 anemia*
- 606 neutropenia*
- 607 lymphopenia*
- 608 thromboembolic
- 609 bleeding tendency
- 610 abnormal morphological*
- 611 premature atherosclerosis
- 612 vacuolated lymphocytes
- 613 granular leukocyte
- 614 thrombocytopenia
- 615 sepsis

VII laboratory abnormalities

- 700 cloudy serum
- 701 hyperlipidemia
- 702 hormones*
- 703 electrolytes*
- 704 liver enzymes*
- 705 muscle enzymes*
- 706 trace elements/vitamins*
- 707 hypoglycemia
- 708 hypouricemia/hypouricosuria*
- 709 hyperuricemia/hyperuricosuria*
- 710 hyperammonemia
- 711 acidosis/ketosis*
- 712 hypoimmunoglobulinemia
- 713 abnormal urea/creatinine*
- 714 reducing substance in urine
- 715 proteinuria

VIII genetics

- 800 consanguinity
- 801 metabolic disease in family*
- 802 SIDS of sibling
- 803 pharmacogenetic defect

IX ophthalmological abnormalities

- 930 retinitis pigmentosa
- 931 cataract
- 932 corneal opacity
- 933 nystagmus
- 934 strabismus
- 935 lens luxation

X food/medication

- 900 oral standard diet
- 901 parenteral nutrition*
- 910 1 g/kg protein intake
- 911 2 g/kg protein intake
- 912 3 g/kg protein intake
- 913 4 g/kg protein intake
- 914 5 g/kg protein intake
- 920 medication

* specification required

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Collection/storage conditions

- Urgency requests: notify us via cmo.klin.genetica@mumc.nl
- All samples must contain patient name, date of birth and type of material.
- Sampling date must be written at page 1 of the request form.
- For children we require at least 1 ml whole blood and/or 2 ml urine.
- When several dedicated assays are requested for the same sample type, only one volume is needed.
- Shipment must be sent on dry-ice.

Instructions for applicants outside the MUMC+			
Material type	Action	Storage conditions	Shipping condition
Li HEPARIN blood	Separate plasma	-20°C	dry ice
EDTA blood	Separate plasma	-20°C	dry ice
Urine sample/collection	Freeze	-20°C	dry ice
Blood spot	-	room temperature	room temperature
Liquor	Freeze	-20°C	dry ice
Other	Please contact the lab by phone (+31 43 3871345, option 1) before sending the material.		

Dispatch

Applicants outside the MUMC+ follow the instructions in the table above.

- *By post*
Maastricht UMC+
Laboratory Clinical Genetics
P.O. Box 5800
6202 AZ Maastricht
The Netherlands
- *By courier (Monday to Friday 08:30 - 17:00)*
Maastricht UMC+
Laboratory Clinical Genetics, Sample Reception
P. Debyelaan 25, 6229 HX Maastricht North Building, 2nd floor, Route 14
The Netherlands

Questions?

Call +31 43 3871345 (option 1) if you have questions about purchase, storage and shipping conditions. Avoid delays and always use the latest version of the application form, which you can find at:

klinischegenetica.mumc.nl/aanvraagformulieren

Laboratory Clinical Genetics

General terms and conditions

1. Use of patient data and materials

The requestor's name must be entered on the first page of the request form. The requestor is responsible for fulfilling the requirement to inform the patient and/or the patient's parent(s) or legal representative of the ways in which patient data and materials are used. If the requestor's name is missing, the request may be refused.

I, the requestor, have informed this patient, and/or this patient's parent(s) or legal representative of the following:

- Where necessary, the personal data required for this test are stored in the MUMC+ systems.
- The MUMC+ Clinical Genetics Laboratory works closely with Radboudumc's partner laboratory. The test may be carried out by the partner laboratory and, in that case, the personal data will where necessary also be stored in Radboudumc's systems.
- In specific cases, the test is referred to a laboratory other than the ones mentioned above and the personal data are processed there.
- The security and privacy of the personal data and the material are guaranteed during this process.
- In order to develop new techniques and improve existing ones, Clinical Genetics uses anonymised patient material, e.g. for quality controls and validation. If the patient objects to the anonymous use of body material, he/she can make this known by ticking the appropriate box on page 1.

2. Requests

- 2.1 In order to avoid errors and delays, requests should be submitted in a clear and unambiguous manner. When completed, this request form contains all the desired data.
- 2.2 Requests may be refused if they contain insufficient information to achieve a result that meets the applicable quality criteria.
The minimum requirements are:
 - Patient identification, including gender, date of birth, address/contact details and unique identification.
 - Name or other unique identification of clinician, care provider or other person legally authorised to request tests or use medical information.
- 2.3 Relevant medical information on the patient must be provided to enable the test to be performed and the result to be interpreted. In case of doubt, a laboratory specialist in clinical genetics can be contacted.
- 2.4 Clinical Genetics must be given the opportunity to discuss the requested test with the requestor/clinician.
- 2.5 A laboratory specialist in clinical genetics is available during office hours to give advice on how to request tests.
- 2.6 By accepting a request, the Clinical Genetics department undertakes to perform the requested work with care and diligence in accordance with the quality criteria applicable to the department.
- 2.7 Before submitting patient material, the requestor is asked to check whether the patient concerned is insured for clinical genetic care. If, after a procedure has been performed, the patient proves not to be insured, the account will be sent to the patient.

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3. Samples

- 3.1 The requestor will submit the samples to be tested to Clinical Genetics under the correct conditions, accompanied by details of material type and identification (name, gender and date of birth) and a request form completed in full.
- 3.2 The materials are collected from each patient as indicated on the request form. Other materials or quantities will only be considered after consultation by telephone.
- 3.3 It is possible to register a cito/urgent request by telephone. See page 1 of the request form.
- 3.4 Samples must be kept and transported in accordance with the conditions stated.
- 3.5 Clinical Genetics may refuse the sample submitted if:
 - the requirements set out in 1, 3.1, 3.2 and 3.4 are not satisfied;
 - the sample does not meet the quality criteria set.
- 3.6 Unless otherwise agreed at the time of submission of the request, Clinical Genetics will keep the (tested) samples or the remainder thereof after testing, in accordance with its own regulations, for an indefinite period.

4. Execution

- 4.1 Clinical Genetics determines the manner in which the work is performed and the method and equipment used to perform it.
- 4.2 All work will be performed in accordance with the applicable norms, standards and rules. Upon request, Clinical Genetics will provide the requestor with the relevant information.
- 4.3 If a request extends to include work in an area of which it has no knowledge or experience, Clinical Genetics will contact the requestor to arrange the outsourcing of this work.
- 4.4 All actions and storage prior to taking receipt of a sample fall outside the responsibility of Clinical Genetics.

5. Results

- 5.1 Results in the form of test reports, advice, information or otherwise will be presented by Clinical Genetics in writing to the person requesting the test.
- 5.2 The deadlines for results are as stated on the request form. In the event of an urgent request, alternative deadlines may be arranged by mutual agreement.
- 5.3 A laboratory specialist in clinical genetics is available during office hours to give advice on how to interpret test results.

6. Confidentiality

- 6.1 Personal information is protected in accordance with the General Data Protection Regulation (GDPR) and ISO-27001. Confidentiality of data is guaranteed and laid down in the hospital regulations of Maastricht UMC+.