

# TEGlab

# LAB USER MANUAL

*Version 2.1*

last updated 29.11.2011

**(EMERGENCY INSTRUCTIONS ON THE LAST PAGE!!)**

## **TEGlab members and phone numbers**

The area code for all phone numbers is 02

### **Key personnel**

Ville Aukee, Laboratory manager	333 7083
Tatjana Saarinen, Laboratory master	333 5548
Raija Rouhiainen, Secretary	333 5575
Craig Primmer*, Head of the lab	333 5571

### **Lab phones**

Pre PCR lab	333 7088
Post PCR lab	333 7087
Electrophoresis lab	333 5821

For additions and/or corrections to the manual, contact [ville.aukee@utu.fi](mailto:ville.aukee@utu.fi)

## **(EMERGENCY INSTRUCTIONS ON THE LAST PAGE!!)**

### **LAB RESPONSIBILITIES**

COMMON CHEMICALS, ORDERS SAARINEN	TATJANA
SEQUENCING, ABI (MAINTENANCE, ORDERS) SAARINEN	TATJANA
ETHANOL NOKKALA	CHRISTIINA
DISHWASHING, AUTOCLAVING	JOHANNA
GMO WASTE (NOTIFY)	JOHANNA
HAZARZOUS WASTE	VILLE
DNA EXTRACTION ROOM	J-P VÄHÄ
BALANCE- AND PH-AREA SAARINEN	TATJANA
MACHINE ROOM	VILLE
POST-PCR AREA	VERONIKA
PRE-PCR RESPONSIBILITY	SHARED
CLONING AREA	USER CLEANS
DGGE ROOM	ROGHELIO
RNA ROOM	ERICA
GEL ROOM	TATJANA
ION TORRENT PREP	OLAF

Responsibilitites include supervising the tidiness of the assigned area, reporting of problems or malfunctions to TEGlab manager, advising in use of equipment and space, etc. However, lab users are always expected to clean after themselves!!

## **EMERGENCY INSTRUCTIONS ON THE LAST PAGE!!)**

### **First things to do when starting in the lab**

- Read this manual
- Introduce yourself to Ville, room 405
- Join the TEGLab mailing list. Go to <https://lists.utu.fi/mailman/listinfo/teglab> and fill in the form
- Fill in the TEGlab user license form (ask Ville)

### **Some rules of the lab:**

- Attend the regular TEGlab meetings ( about every first Wednesday of each month) and learn about new things or discuss issues.
- You must have filled out the lab user license before starting
- Be sure you have an assigned bench where to work.
- Subscribe to TEGlab mailing list (see above for instructions).
- Keep you bench place clean, and be tidy elsewhere too.
- Be safe. A laboratory can be a dangerous place.
- Inform Ville at least 10 working days before vacating your bench
  - clear your bench & freezer storage

### **Layout of the lab:**

- The lab is divided into pre- and post PCR sections
- There are also smaller labs, dedicated to certain methods or machinery
- Do not carry lab ware or pipettes from one area to another

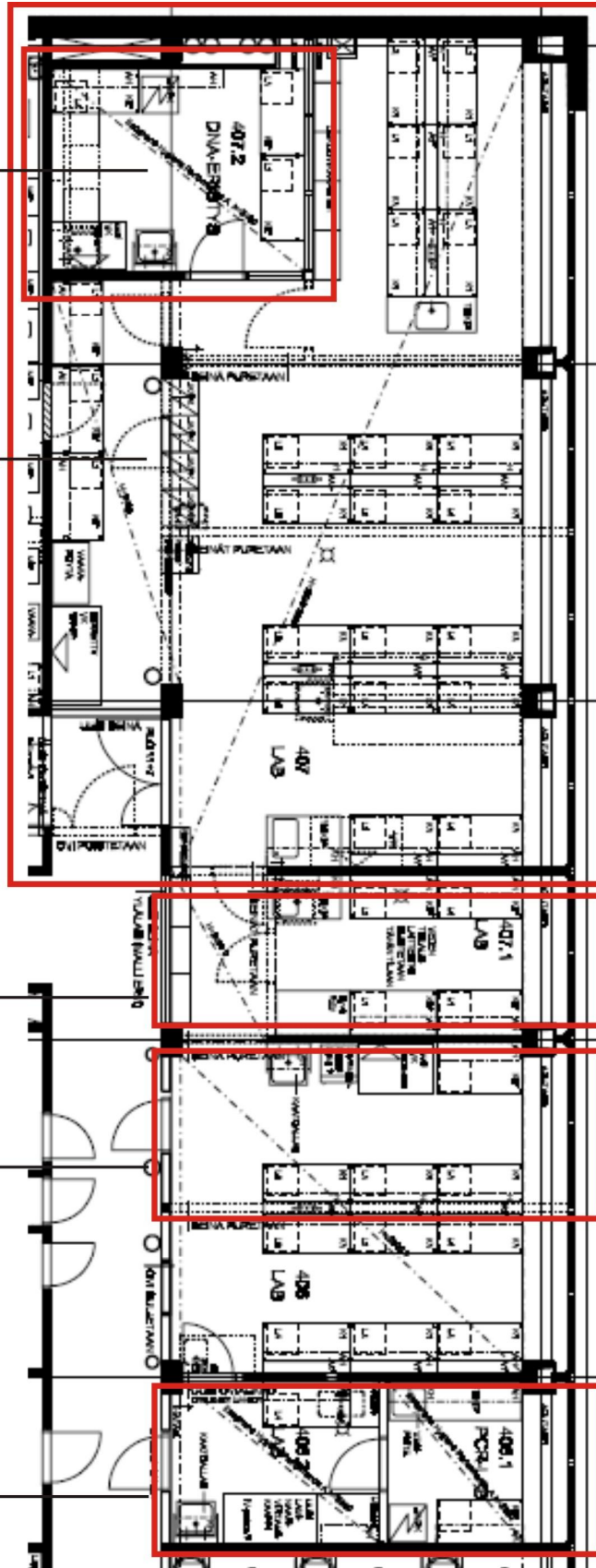
DNA Extraction

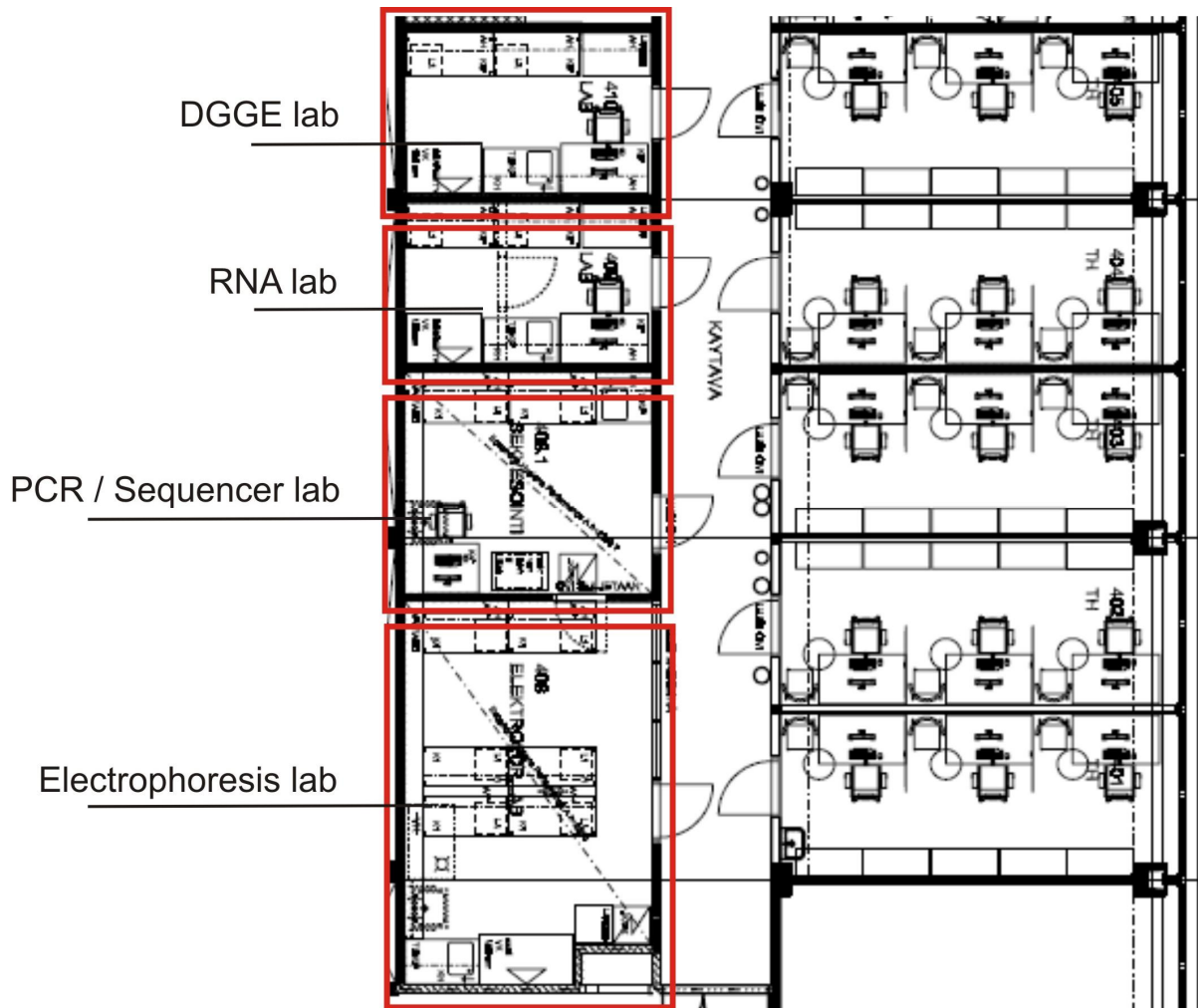
Pre-PCR

Machine room

Post-PCR

Cloning area





## COMMON SPACE AND EQUIPMENT

If needed, ask Ville for specific instruction manuals for each piece of equipment. Certain people will also be able to help you with operation of certain equipment (refer to the lab user license)

If something breaks down or is otherwise out of order, contact Ville. When ABI is in question, you may also contact Tatjana.

### Pre-PCR lab (407)

Each bench section should have one vortex and minicentrifuge. DO NOT move any machines without consulting Ville first. Please DO NOT shift items or equipment between pre and post-PCR sections. Ask Ville about possible freezer space in this section of the lab. Also the common chemicals are

situated in this section, right between the analysis computer and a fume hood.

### **DNA-extraction room (407.2)**

There's a vacuum pump and a manifold for DNA extraction in this room. Consult JP or Kristiina in the use of these. You can also perform DNA salt extraction, which is supported by TEGlab (= items needed are part of the bench fee) Also a hybridisation oven, a spectrofotometer, a fume hood and one table centrifuge are located here.

### **Machine room (407.1)**

Here you can find a bunch centrifuges, an ice machine, a deep freezer, a plate centrifuge, and a DNA concentrator.

### **Ultrapure water**

The main ultrapure water system is in machine room 407.1. The backup clean water machine is in dish washing room 425. Distilled water tanks are in Pre-PCR, Post-PCR and sequencing laboratories, but don't use tank water for PCRs.

See instructions for the simplest way to operate the water machine:

### **How to use PureLab Ultra machine**

Manual Dispense

Step 1 • Product Quality = When you see only this:



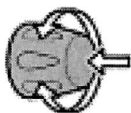
PRESS THE POWER BUTTON

ONCE AND WAIT UNTIL THE SCREEN CHANGES ( ABOUT 30 SEC. – look for value 18.2Ω )

1. ENSURE PURELAB Ultra is in recirculation

Step 2 • Dispense

1. PRESS Dispense Controller once.



2. ROTATE Dispense Controller clockwise.

If the Dispense Controller is not rotated within 15seconds the unit will revert to recirculation mode.

3. ADJUST the flow from the unit by rotating the Dispense Controller as necessary.

**Note:** To prevent accidentally leaving the unit on continuous droplet dispense the PURELAB Ultra will only dispense for a maximum of 4 minutes from the last turn of the Dispense Controller. For large volumes it is recommended that the Volumetric Dispense mode is used.

4. PRESS Dispense Controller once to stop dispensing and return to recirculation mode.

### **Post PCR room (406)**

Half of this space is allocated to Recombination Group (Harri Savilahti's research group). The other half (by the fume hood) is for post PCR applications. Again, do not carry equipment out of here.

### **Cloning laboratory (406.2)**

This room is for cell cultures and all cloning related work. Here you can find a Kojair sterile laminar, cooling centrifuge with T40 rotor (for 10-50 ml tubes) and AC1.14 rotor (for 1,5-2,0 ml tubes), a small capacity high pressure autoclave, Gene Pulser Xcell™ Electroporation system and a shaking incubator. DO NOT move any pipette sets from the laminar to anywhere else. Any bacteria containing waste should be placed to RISKIPAK boxes (yellow plastic bag).

### **Cold room (411):**

Shelf space in cold room is allocated according to the needs of the groups. If you need storage place there, contact Ville.

### **DGGE (Denaturing Gradient Gel Electrophoresis)/ IONPrep laboratory (410):**

Along with DGGE system, a large scale incubator is located here. Also a fume hood suitable for radioactive work is here. Roghelio is the man to consult if you're interested in the use of the DGGE system. Olaf will tell you about the Lontorrent PGM.

### **RNA laboratory (409):**

Clean (DNA and RNase free) space for working with RNA samples. DO NOT move any pipette sets from here or to here. Also new pipette sets should be autoclaved before placing here. Erica is in charge of this area. A TissueLyser for preparing samples is also here.

### **Sequencing laboratory (408.1):**

Keep this laboratory's door closed because of air conditioning.

*Do not* run the sequencer during thunder storms; the laser might get damaged.

The lab has ABI Prism 3130xl Genetic Analyzer (16 capillary) sequencing machine. You can leave your ready sequencing samples to Tatjana or, once you have received proper training, operate the machine yourself. NOTE: Use ONLY SEMI-SKIRTED 96 Detection Plates in this machine otherwise there is risk of capillary damage.

Here you'll also find our PCR machines. Note that the PCR machines have a reservation system. Keep as few personal PCR-programs as possible in the machines. DELETE all programs which you are not using anymore! Also several centrifuges are here.

This room also contains Thermo centrifuge, which is able to spin truly fast rpm at low temperature. Consult Mikko Nieminen.

This room also contains the Lontorrent, which is a "next generation" sequencing machine. Olaf Thalmann or Meri Lindqvist will tell you more about the possibilities of using it.

## Sequencing and Fragment Analysis

Tatjana Saarinen is in charge of preparing (adding formamide & size standard in fragment analysis) and running sequencing- and fragment analysis samples. Read the Sequencing and Fragment Analysis Guide before running samples or asking Tatjana to run. If you don't have a copy of this guide, ask Ville, or check out [http://www.sci.utu.fi/biologia/Frag\\_ja\\_sek\\_ajot.html](http://www.sci.utu.fi/biologia/Frag_ja_sek_ajot.html) from the web pages for the Centre of Evolutionary Applications.

### Electrophoresis laboratory (408):

Agarose electrophoresis apparatuses, UV-tables, Dark Reader, and the GelDoc imaging system are here.

**SAFETY NOTES:** We use Ethidium bromide, so always wear **gloves** when you are working here and dispose them when you leave the room. With the UV-tables use BOTH goggles and protection mask if you are working **in direct UV exposure**. If you want cut bands from your gel, use the Dark Reader.

### Preparation and handling of EtBr agarose gels

The ethidium bromide (EtBr) used for staining of agarose gels is mutagenic: it can directly incorporate into DNA and change its structure. EtBr is harmful if inhaled, swallowed or in skin contact. It is soluble in water and thus can be removed from the skin by rinsing with water and mild detergent. When using EtBr in the lab you must 1) prevent its evaporation, 2) prevent contact with your skin by always using gloves when handling items possibly contaminated with EtBr, 3) protect others by not spreading EtBr anywhere outside the apparatus directly involved in the gel run.

Always dissolve the agarose in the microwave first, and let the agarose cool off (in a Erlenmeyer bottle under running water or using magnetic stirrer) before adding one drop of EtBr 2,5µl/50ml gel solution (stock solution's concentration is 10mg/ml) pipette stock solution inside the fume hood. Cast the gel and rinse off the tube or bottle. **Discard your gloves when you leave** the electrophoresis laboratory. After the gel run DO NOT leave power packs *on* and DISCONNECT cables from the electrophoresis apparatus. When using the BioRad gel imaging system or the UV-tables, make sure your gel is dry and that you clean the light tables well. Don't use wet gloves when typing.

### Storage (416)

This is where ALL the TEGlab consumable plastics are stored. The TEGlab storage cabinets are situated in the back part of the room and are clearly marked. Keep this area in order. Note to Ville if something is about to run out of stock.

Remember that in this area there are also the storage cabinets of different research groups. Do not utilize them without authorization.

### **Washing room (425)**

A dishwasher, an autoclave and a backup clean water machine are in this room. Annika takes care of operations here. She collects the dishes from the laboratories. If you have something special to wash or to autoclave, talk with her.

### **Seminar room/teaching laboratory II (431)**

Ethanol storage, 2 scales and a pH-meter are here.

## **ADDITIONAL NOTES**

### **Balances**

The lab has four weighing scales. Sartorius balance in the electrophoresis lab (room 408), max load 150 g, d=0.001 g. Precisa balance in the pre-PCR lab (room 407), Ohaus 210 and Sartorius are in seminar room/teaching laboratory II (room 431). Don't exceed balance's maximum load limit. Always clean any spilled substances.

### **Centrifuges**

The lab has eight bench top centrifuges for Eppendorf tubes, two are located in the ABI room (408.1), one in post PCR room (406), one in the cold room (411), two in the machine room (407.1) and one in DNA extracting room (407.2).

The Jouan centrifuges for 10ml-50 ml falcon tubes and 96 plates are in room 407.1 and 406.2. Jouan CR3 is mostly used for centrifuging strips and plates using the plate holder.

Eppendorf tubes can be centrifuged at maximum 13 000 rpm in the other centrifuges, and in the Jouan centrifuge using the normal holder. DO NOT go over 4100 rpm with T40 rotor with any tubes. Balance your tubes or plates as accurately as possible.

Thermo refrigerated centrifuge for high fidelity centrifuging is located in the AC controlled sequencing room. Talk to Mikko Nieminen about usage.

### **Ethanol (Christina Nokkala)**

Ethanol is stored in an assigned locked cupboard in Seminar room/teaching laboratory II (431). Keys are in Christiina's possession. Sign the proper sheet (Aa, A) when taking a 500 ml bottle, and hereafter the bottles should be marked and stored by each team separately in a cupboard.

### **Fridges, freezers and the cold room**

The lab has assigned roughly one freezer shelf per user. Defrosting will be organized at least once a year, and groups are responsible for taking part in this job.

Most of the space in the cold room (+7 °C) has been assigned to the research teams according to the needs of the groups. There's a freezer

room in Plant Physiology, in which the TEGlab has some shelf space. Talk with Ville if you need extra space from there.

#### **Dishwashing** (Heidi, room 425)

Used lab-ware should be rinsed and taken into the basins placed near the sinks in every laboratory. Heidi collects them and does the actual dishwashing. If you have something special to wash or autoclave discuss with her.

#### **Keys to corridor**

Raija the secretary can provide you with keys. Or if you already have university's electronic key notify number of your key to her to get access activated.

#### **pH-meter** (room 431)

Always consult Tatjana before using the pH-meter for the first time. Instruction sheets in Finnish and in English are next to the machine on the wall. The pH-meter is always turned on; if it is turned off it has to be recalibrated. Calibration solutions are next to the pH-meter.

#### **Pipettes** (Tatjana Saarinen, room 405)

Tatjana Saarinen takes care of all common pipettes (marked TEGLab). She also calibrates and replaces broken parts to them. If you have some problems or you are not sure of some pipette's calibration, contact her. NOTE: there are also pipettes which are only for certain groups to use (clearly marked). Ask permission to take such a pipette.

Because of problems in the past, all TEGlab Biohit Proline pipettes (small volumes) are now stored in room 405. You may sign them out, but then you're responsible for it. When you don't need it anymore, come and return it. Ville will inspect if it has been broken or bent.

#### **Postal service**

In the secretary's office (424) you can find a locker for university internal mail (sisäinen posti) and outgoing mail (ulkoinen posti).

When expecting a special delivery such as  $-20^{\circ}\text{C}$  or  $< +4^{\circ}\text{C}$  package, give a forewarning to secretary and/or laboratory master. You may also make an announcement on the teglab-mailing list.

#### **Pre-PCR lab fume hoods and hazardous waste**

Hazardous waste is collected in bottles in the fume hoods. Phenol, chloroform, iso-amylalcohol and isopropanol are poured into the collecting bottles assigned to this, and dirty pipette tips and eppendorf tubes used with these chemicals should be in a separate bottle. If there is no bottle for that chemical you are using ask suitable bottles from Annika.

Any waste containing bacteria should be placed to a RISKIPAK box (yellow plastic bag).

It is essential that you clean up after yourself after using the fume hoods.

## LIST OF COMMON EQUIPMENT

### Sequencing:

- ABI Prism 3130xl genetic sequencer / 16 capillaries + analysis software GeneMapper 4.0

### PCR:

- 2 x Eppendorf Mastercycler Gradient (96-well)
- 6 x MJ Research PTC 100 (96-well)
- 1 x Applied Biosystems 2720 Thermal Cycler (96-well)
- 1 x Finnzymes Piko

### Electrophoresis:

- lots of small and large apparatuses

### Gel documentation / pictures / manipulation

- BioRad GelDoc System

### Cloning:

- fully equipped cloning laboratory

### Cell culture:

- incubators, fully equipped cell culture laboratory

### Spectrofotometry:

- NanoDrop ND-100
- Agilent 8453 + Dell processor

### DNA extraction:

- 2 x Eppendorf Vacuum Manifold, salt extraction

### Cold storage:

- HERA Deep Freeze -85 °C
- -20 °C freezers
- refrigerators
- cold room, freezer room

### in addition:

- laminars, fume hoods, large and small centrifuges, heat blocks, ovens, analysis- and cup scales, ice machine, UV-tables, DarkReader, DGGE-equipment, incubators, autoclaves, PureLab Ultra Water-system, microscopes (light- and preparation), Drosophila-lab, RNA-lab, TissueLyser, etc.

## LIST OF CHEMICALS FOUND IN THE LAB

If you use see that any chemical is running low, please inform Tatjana Saarinen. It can take up to a month for certain chemicals to arrive, so let her know well in advance. Most of the common chemicals are in Pre-PCR laboratory. Ethanol is kept in a locked cupboard in room 431 (key is in Christina Nokkala's possession). Phenol, chloroform, isopropanol etc. are stored in the fume hoods or in a fume cabinet in post PCR. Updated list of the common chemicals is in: \\Utu.fi\verkkolevyt\Biologian genetiikka\Kemikaalilista. Detailed information about each chemical's toxicity, safety and handling information etc. can be seen in ChemDAT – database also in our network drive. Path: \\Utu.fi\verkkolevyt\Biologian genetiikka\Kemikaalilista\Chemical Data Sheets.

There are also the safety notions in paper form in the pre –PCR lab. Unfortunately nämä ovat vain suomeksi.

More information about the safety notes of all chemicals can be found from [ICSCs pages](#)

### **A**gar bacteriological

Agar Corn Meal  
Agarose low EEO  
iso-Amyylialkoholi  
Ammonium Sulfate  
Ammonium persulphate  
Ammoniumeisensulfat (iii)- Sulfat  
Ferriammoniumsulfat  
3-Aminopropyl-triaethoxysilan 98%  
Ampicillin Sodium Salt  
Aktivkohle  
Alcian Blue 8 GX  
Acridine orange  
Azure B-certified  
Acrylamide  
Bis-Acrylamide  
Albumin  
Acetone  
Acetic Acid 99-100% (Etikkahappo)

### **B**oric Acid (Boorihappo)

Bariumhydroxid-Octahydrat  
Bromophenol Blue  
Blotting Grade Blocker

### **C**asein tryptic peptone (tryptone)

Calcium Chloride anhydrous  
Calcium Chlorid-Dihydrat  
Citric acid monohydrate  
sitrunahappo-1-hydraatti  
Certistain  
CTAB Cetyltrimethyl ammonium bromide  
Chloroform  
Chromosulfuric acid

Carmin fo microscopy

Colchicine

Canada Balsam in Xylol Neutral

trans-1,2-Diamino-cyclohexane-N,N,N,N-tetraacetic acid

Dithio-oxamide (rubeanic acid)

Deoxycholic acid

Sodium Salt(3d,12d-Dixydroxy-5b-Cholan-24-oic acid)

N,N-Dimethyl-Formamide

Dimethyl Sulfoxide

### **E**DTA Dinatriumsuola (TITRIPLEX)

Entellan

Ethylene Glycol-bis( b-aminoethylether)-N,N,N,N-tetraacetic acid

Ethylenediaminetetraacetic acid

Ethylene Glycol

TriEthanolaminhydrochlorid

Ether ( Diethyl Ether) Eetteri

Etan-1,2-Dion 40% i vatten

Etaani-1,2-Dioni 40% vesiliuos (Glyoxal 40 wt.% solution in water)

Eosin gelblich

Exsikkatorfett

### **F**ormamide

Formamide Ultra pure grade

Formic Acid 98%

Formaldehyde solution

Fuchsin, Basic D(+)-

### **G**lucose (Dextrose, Corn sugar)

D(+) Glucose anhydrous

Glycine

Gelatine  
 Glycerin( etwa 87%) (Glycerol)  
 L- Glutamic acid  
 D(+)-Galactose  
**H**epes  
 Hydrochloric acid 36-38% (Suolahappo)  
 Hydrochloric acid 2,0 N (2,0 M)  
 Hydrochloric acid 0,1 N (0,1 M)  
**J**od doppelt sublimiert  
**K**aliumchlorid (Potassium chloride)  
 Kaliumdihydrogenphosphat  
 (Potassium Dihydrogen Phosphate)  
 Kaliumcarbonat(Potassium carbonate)  
 di-Kaliumhydrogenphosphat-Trihydrat  
 Kaliumdisulfit ( Potassium disulfite)  
 Kalium Chrom(III) Sulfat  
 (Potassium Chromium(III) Sulfate)  
 Kaliumnitrat  
 Kaliumacetat (Potassium Acetate)  
 Kaliumhydroxid  
 Kaliumjodid neutral  
 Kuparisulfaatti  
 Koboltti-II-kloridi heksahydraatti  
 Koboltti-II-Nitraatti  
 Kamferia  
 Ksyleenisyanoli (Xylene cyanol F.F)  
 DL- **L**actic acid sodium salt  
 Lactic acid about 90% (Maitohappo)  
 Litiumkloridi (Lithium chloride)

**M**ethyl-4-hydroxybenzoat (Nipagin M )  
 Magnesiumsulfat- Heptahydrat  
 Magnesiumacetat Tetrahydrat  
 Magnesiumchlorid  
 L(-) Malic acid  
 Maleic acid (Maleiinihappo)  
 D(+)- Mannose  
 Mangan (II)-chlorid-tetrahydrat  
 Methyl green  
 Methyl a-d-Mannopyranoside  
 N,N,N,N-tetramethylethylen-diamin  
 (Temed)  
 Methylene blue trihydrate (Metyleenisini)  
 MOPS  
 (3-(N-Morpholino)propane-sulfonic acid)  
 Milk (Non-Fat Dry Milk)  
 Mowiol  
 Methanol  
**N**atriumhydroxid (Sodium Hydroxide)  
 tri- Natriumcitrat-Dihydrat  
 Natriumfosfaatti (Sodium phosphate)  
 anhydrous  
 Natriumhydrogenphosphat  
 (Sodium Hydrogen Phosphate Anhydrous)  
 di- Natriumhydrogen-phosphat Dihydrat  
 Natriumchlorid  
 Natriumhydrogen-carbonat  
 Natrium carbonat anhydrous  
 Natriumdihydrogen-phosphat-Monohydrat  
 Natriumacetat-Trihydrat  
 Natriumsulfit  
 Natriumiodid  
 Natriumasetaatianhydraatti  
 (Sodium acetate anhydrous)  
 di- Natriumtetraborat-Decahydrat  
 Natriumnitrat  
 Natriumthiosulfat-Pentahydrat  
 Natriumborhydrid  
 Natriumcacodylat  
 Naphthol Green B  
**O**rcein  
**P**henol  
 Phenol. Saturated solution  
 Paraformaldehyd  
 Pepton aus Casein  
 n- Propyl Gallate anhydrous  
 1- Propanol  
 2- Propanol (Isopropyylialkoholi)  
 1,4- Bis (acryloyl) piperazine for  
 electrophoresis  
 PVP (-K30) Polyvinylpyrrolidone  
 PVPP Polyvinylpyrrolidone  
 Polyethylene Glycol  
 Penicillin-streptomycin solution  
**Q**uinacrine Dihydrochloride  
**S**DS (Sodium dodecyl sulfate)  
 Saccharose  
 5-Sulfosalisyylhappo  
 D-Sorbitol anhydrous  
 Silvernitraat PA  
 Starch Potato  
 Silica gel 60( 0,015-0,040 mm)

Silica gel with moisture indicator (blue gel)  
 (for drying)  
**T**RIS (hydroksimetyyli-aminometaani)  
 Triton X-100  
 Iso-octyl phenoxy-polyethoxyethanol  
 a-Terpineol  
 Trypsin 1:250  
 Titriplex II  
 Tween 20  
**U**REA  
**X**ylene  
**Y**east extract

## **IN CASE OF AN EMERGENCY**

<b>Common emergency telephone number</b>	<b>(0) 112</b>
<b>Police</b>	<b>(0)100 22</b>
<b>Guarding</b>	<b>(0)250 0893</b>
<b>Service man in duty</b>	<b>1233</b>

**Fire extinguishers are located on corridor walls just outside of Pre-PCR laboratory (room 407) and one of the offices (room 428).**

**Emergency showers are in Pre-PCR laboratory (room 407) and in cloning laboratory (406.2). Get acquainted where they are before starting to work in laboratory.**

**FIRST AID –Kit can be found from the back wall of the Pre-PCR.**

**Chemical Safety Instructions are found from the pre-PCR lab (next to the chemicals) and from the network drives:**

ChemDAT –database , Path: \\Utu.fi\verkkolevyt\Biologian  
genetiikka\Kemikaalilista\Chemical Data Sheets.

### **In case of -20 freezer breakdown**

1. Check the temperature – If the alarm is beeping, the temperature is above -14c. If it keeps on rising, start to move the items to other freezers!
2. Check if there is any free space in other freezers. Most likely there is free space at least in the pre PCR chest freezer. Pack items in plastic bags (found from room 405,bottom shelf under scanner), shelf by shelf. If all freezers are full, use the freezer room plant physiology (2<sup>nd</sup> floor), or an emergency chest freezer in the teaching lab in K1 (take elevator to k1, walk left to the end of the corridor and enter the big lab. The chest is in the far

corner, labelled 'genetics emergency freezer'). Notify Ville and then everyone by mailing [teqlab@lists.utu.fi](mailto:teqlab@lists.utu.fi) about the incident.

## In case of -74c freezer alarm

Call these people until someone answers and also read the instructions how to proceed.

1. Ville Aukee 050 3204118
2. Erica Leder 050 3398204
3. Anti Vasemägi 045 1372568
4. Craig Primmer 050 5011207
5. Kalle Rytönen 041 4320821
6. Mikko Nieminen 050 5671636
7. Harri Savilahti 040 7085795
8. Elsi Pulkkinen 050 3665067
9. Seppo Nokkala 040 5902644

## Instructions for an emergency situation (-74°C Freezer)

-Alarm goes on at -62 °C, normal running temperature is -74 °C

-Check the alarm codes from the display; see instruction manual

Check that the door is properly closed (Do not open it)

- if not, then close it and wait for a while to see if the temperature returns to -74°C. If yes, then you're good to go home.

Remember: the freezer temperature doesn't change quickly, so monitor it for quite a while (> 15 min) and see which direction it is going.

- if the door is properly closed, but the temperature keeps on increasing, follow this procedure:

1. The freezer will stay cool for a day or so, but only if the **THE DOOR IS KEPT CLOSED** – put a sign saying this on the freezer. If the breakdown occurs during working hours call the repair service:

- Turun Kylmähuolto

- Juha Naukkarinen 0500-524917

- 2<sup>nd</sup> number to call is Kristian Stenman 0400 679834

(Stenman Oy, Vantaa).

If the repair guy cannot come within 12h or if the temperature is constantly rising, start moving the freezer items into the chest freezer in K1 (room 003, key in Ville's top drawer).

2. If repair can't be expected before it is too late, and there's not enough free space

in any of the -80 °C freezers, go get DRY ICE. (take a taxi if necessary).

DRY ICE (from AGA/Ahlsell )

- phone: 020 584 4809

address: Ahlsell (AGA) Oy, Polttolaitoksenkatu 11, 20380 TURKU

- open: Mon-Fri 07:00-16:00

- university customer number: 31456001

- Make sure that enough dry ice is bought – in particular over the weekend (get at least 60- 80 kg). When the dry ice has arrived, spread it over the items in the broken freezer. **DO NOT OPEN THE DOOR AFTER THIS!**
- There are large styrofoam containers in the 4<sup>th</sup> floor: in a cabinet in the stairway behind the network printer. Use these for carrying the ice or borrow some from AGA.

### In case of serious ABI problems

If none of the staff is around, please call to one of the numbers below. They might ask for machine details. Those can be found from right side panel of the sequencer.

Applied Biosystems Finland office (service, technical support, software support, ordering)	09 693 794 27
FIELD SERVICE	0400 864712- MAURI 040510779 TERO

### In case of a GMO related incident

In a situation of unexpected contamination, exposure, or other serious incident occurs, the following procedures will be followed:

1. Prevent additional danger according to possibilities. In a serious case, contact the authorities immediately (tel 112)
2. Perform CPR if someone is hurt
3. Isolate the danger zone
4. inform the people working in the laboratory ([genlab@lists.utu.fi](mailto:genlab@lists.utu.fi), [teglab@lists.utu.fi](mailto:teglab@lists.utu.fi)). If necessary, inform the surroundings.
5. Start to eliminate the danger; decontamination of facility, machinery, protective clothing.
6. Repair the damages and find out what happened. Find improvements safety procedures.

Responsible people in a case of GMO incident: lab manager Ville Aukee, room 405,  
tel. 0503204118  
laboratoriomestari Tatjana

GMO facilities, class 1:

Saarinen,  
room 405  
rooms 406.1 and 406.2. In  
addition, deep freezer room in  
basement K-1, room 003 (to  
be added).