

# FOTOLAB - Wet Side

A computer in your traditional darkroom can be helpful, here is a small program aimed to simplify your work.

This software is freeware, free of use.

It's forbidden to sell or reuse it in any form, partially or totally, in a commercial product.

This program is given as is, without any warranty.

No responsibility is assumed for its use or consequences of its use.

For any comment, improvement or bug, you can contact me directly at: [claudio@bonavolta.ch](mailto:claudio@bonavolta.ch)

Preliminary comment: the screen (and every other light source ) of your PC must be inactive. For B/W, by example, with a red screen (plastic films like Rubylith could be used) or the screen can be shut down completely with panchromatic emulsions.

This program groups various functions:

## Films/Papers Processes

- Monitoring of development processes fully definable by the user.

## Dilutions

- Calculation of dilutions.

## Units Conversion

- Conversion of major photographic units of measure.

## Development Times Conversion

- Evaluation of development times (developer) in case of temperature change.

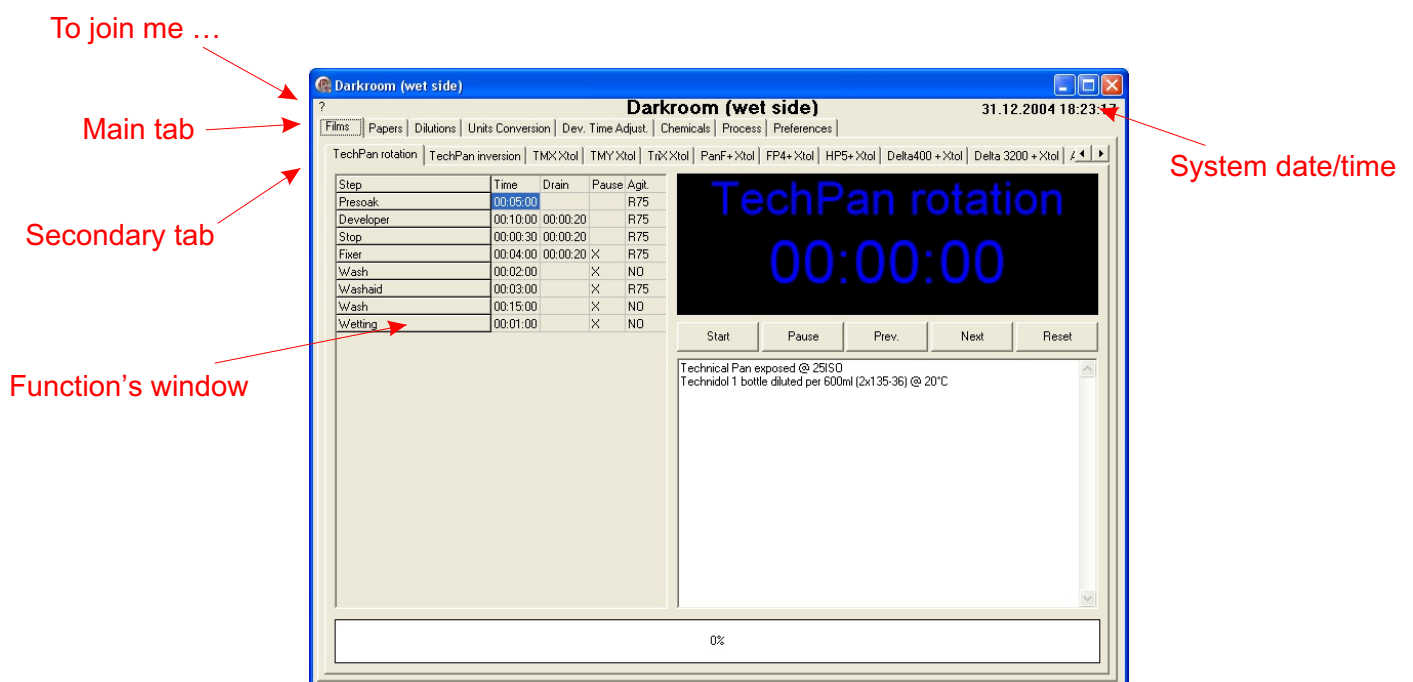
This is based on Ilford's abacus.

## Process

- Maintenance of the various processes on **Papers** and **Films** tabs.

## Options

- Modification of program's general options.



# Papers/Films - Processes

These functions lets you monitor several development processes for films and papers especially when they become somewhat complex and require several stopwatches.

The process is defined by a serie of steps which each has a treatment time and, optionally, a drain time which can be or not followed by a pause when the operator's intervention is required.

These steps follow each other automatically without the need for the operator to click to launch the next step.

In this idea, it's important that the drain times are realistic.

These processes are fully definable by the user according to his own working methods via the Processes tab.

These processes are stored in text files (see the readme.txt file for further informations), anyway, it's possible to modify each process step in the program itself until the step starts.

Take care by doing this as the timer could catch you by doing a "last-second" mod ...

The agitation method is given for each step. The characteristics of the agitation methods are stored in a text file.

A comments field lets you indicate all the subtleties of your process (products, dilutions, temperatures, agitation, ...).

Button "Start" launches the process.

Button "Pause/resume" puts the process in idle state until the next click which reactivates it.

Button "Previous step" jumps to previous step and puts the process in idle state.

Button "Next step" jumps to the next step and puts the process in idle state.

Button "Reset" re-initialize the process but doesn't clear the modifications eventually done in the table.

These mods are maintanied until the application is closed. If you want to save them permanently, you should modify them through the the Processes tab.

It's also possible to switch to a monochrome display and to modify the sound options via the Options tab.

The screenshot shows the 'Darkroom (wet side)' application window. The interface includes a menu bar, a step list table, a large digital timer, and control buttons. Red arrows point to specific features with labels:

- Time column**: Points to the 'Time' column in the step list table.
- Drain column**: Points to the 'Drain' column in the step list table.
- Pause column**: Points to the 'Pause' column in the step list table.
- Agitation column**: Points to the 'Agit.' column in the step list table.
- Step column**: Points to the 'Step' column in the step list table.
- Current step blue=inactive red=active yellow=paused**: Points to the color-coded status of the 'Color developer' step.
- Remaining time for the current step**: Points to the large digital timer display showing '00:02:43'.
- Agitation blue=time before red=remaining time**: Points to the 'Rotation 75 rpm' text below the timer.
- Reset button**: Points to the 'Reset' button in the control panel.
- Previous step button**: Points to the 'Prev.' button in the control panel.
- Next step button**: Points to the 'Next' button in the control panel.
- Pause/Resume button**: Points to the 'Pause' button in the control panel.
- Start button**: Points to the 'Start' button in the control panel.
- Executed step in blue**: Points to the 'Pre-heat' step in the table.
- Active step in red**: Points to the 'Color developer' step in the table.
- Step not done Time can be changed**: Points to the 'Stabilizer' step in the table.
- Current step progress bar**: Points to the progress bar at the bottom of the window.
- Comments on the process**: Points to the text area at the bottom of the window.

Step	Time	Drain	Pause	Agit.
Pre-heat	00:05:00	00:00:20		R75
Developer	00:05:30	00:00:30		R75
Wash 1/4	00:00:30	00:00:30		R75
Wash 2/4	00:00:30	00:00:30		R75
Wash 3/4	00:00:30	00:00:30		R75
Wash 4/4	00:00:30	00:00:30		R75
Reversal	00:02:00	00:00:30		R75
Color developer	00:04:00	00:00:30		R75
Pre-Bleach	00:02:00	00:00:30		R75
Bleach	00:06:00	00:00:30		R75
Fixer	00:04:00	00:00:30		R75
Wash 1/4	00:00:30	00:00:30		R75
Wash 2/4	00:00:30	00:00:30		R75
Wash 3/4	00:00:30	00:00:30		R75
Wash 4/4	00:00:30	00:00:30		R75
Final wash	00:05:00		X	NO
Stabilizer	00:01:00			NO

# Chemicals - Dilutions

These functions allow to calculate dilutions by using the procedures most commonly used in photography.

## Dilution 1+x

Calculates the stock solution needed to obtain a final volume at a dilution expressed in the form 1+x. Where 1 is the quantity of stock solution and x the water quantity.

Does also the reverse calculation from the stock solution and dilution to the final quantity.

## Dilution gr/l, ml/l, ...

Calculates the solution or powder necessary to obtain a final volume at a dilution expressed in the form of a ratio like grams/liter, milliliters/liter, ounces/gallon, ...

All kind of units are allowed provided they remain coherent.

## Dilution in %

Calculates the stock solution needed to obtain a final volume at a dilution expressed in percentage. The concentrate is also expressed in percentage.

The various buttons "Compute" do the calculations for the respective line.


The screenshot shows the 'Darkroom (wet side)' software interface. It has a menu bar with 'Films', 'Papers', 'Dilutions', 'Units Conversion', 'Dev. Time Adjust.', 'Chemicals', 'Process', and 'Preferences'. The title bar says 'Darkroom (wet side)' and the date/time is '31.12.2004 18:41:56'.

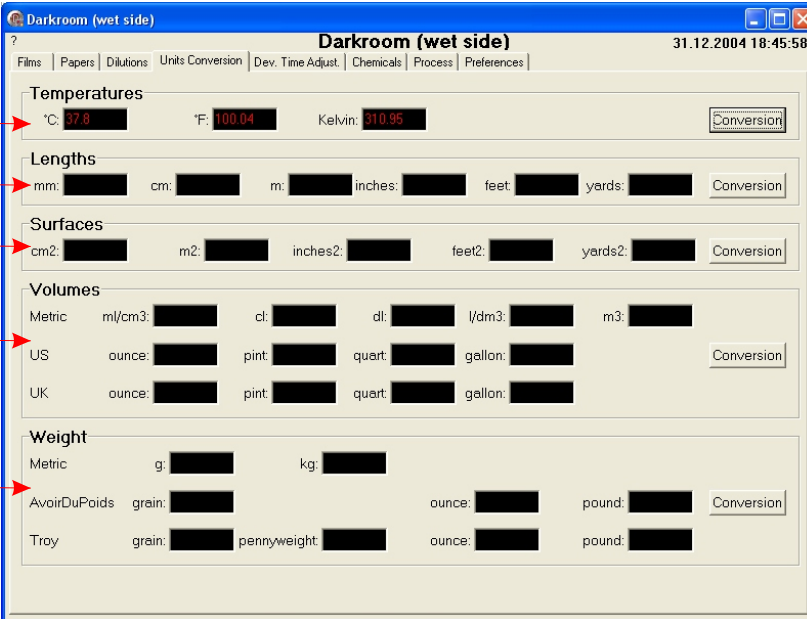
The interface is divided into three sections for different dilution methods:

- Dilution 1+x:** This section has two rows of input fields. The first row has 'Final qty:' (240), 'Dilution:' (1 + 2), and 'Stock qty:' (80). The second row has 'Stock qty:' (100), 'Dilution:' (1 + 3), and 'Final qty:' (400). Each row has a 'Compute' button.
- Dilution gr/l, ml/l, ...:** This section has one row of input fields. It has 'Final qty:' (500), 'Dilution:' (20 / 1000), and 'Stock qty:' (10). There is a 'Compute' button.
- Dilution %:** This section has one row of input fields. It has 'Final qty:' (1000), 'Finale conc.: 2 %', 'Stock conc.: 28 %', and 'Stock qty:' (71.4285). There is a 'Compute' button.

# Units - Conversions

These functions convert between common photographic units..

The various buttons “Conversion” do the respective operation for the line .



**Darkroom (wet side)** 31.12.2004 18:45:58

Films | Papers | Dilutions | Units Conversion | Dev. Time Adjust. | Chemicals | Process | Preferences

**Temperature**

°C: 37.8 °F: 100.04 Kelvin: 310.95 [Conversion](#)

**Length**

mm: cm: m: inches: feet: yards: [Conversion](#)

**Surface**

cm2: m2: inches2: feet2: yards2: [Conversion](#)

**Volume**

Metric ml/cm3: cl: dl: l/dm3: m3:

US ounce: pint: quart: gallon: [Conversion](#)

UK ounce: pint: quart: gallon:

**Weight**


Metric g: kg:

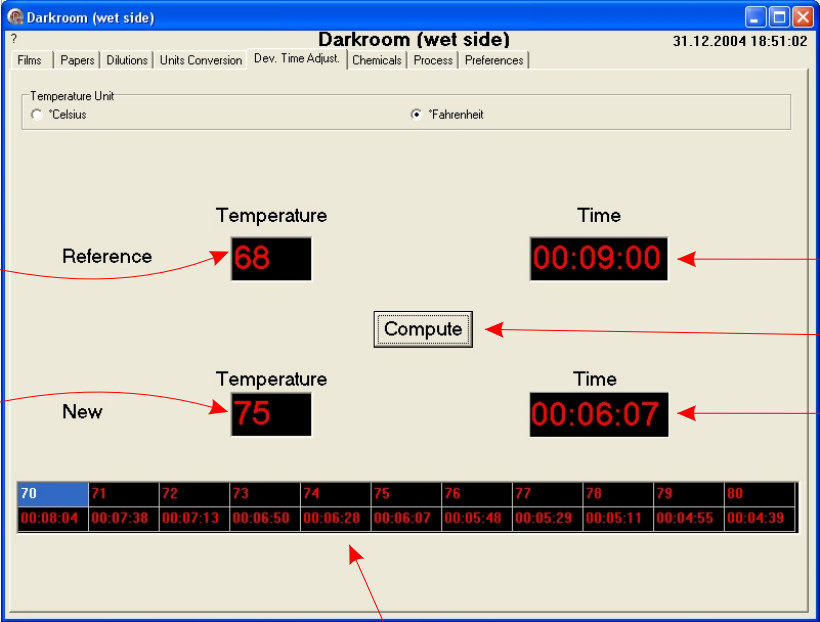
AvoirDuPoids grain: ounce: pound: [Conversion](#)

Troy grain: pennyweight: ounce: pound:

# Development Time Conversion

This function based on Ilford's abacus, evaluates the development time when the temperature is different from the known conditions.

This calculation is approximative and should be considered as a starting point .



The screenshot shows the 'Darkroom (wet side)' application window. The interface includes a menu bar with options: Films, Papers, Dilutions, Units Conversion, Dev. Time Adjust, Chemicals, Process, and Preferences. The main area has a 'Temperature Unit' section with radio buttons for '°Celsius' and '°Fahrenheit'. Below this, there are two rows of input fields: 'Reference' and 'New'. The 'Reference' row shows a temperature of 68 and a time of 00:09:00. The 'New' row shows a temperature of 75 and a time of 00:06:07. A 'Compute' button is located between the two rows. At the bottom, there is a table with 11 columns representing temperatures from 70 to 80, each with a corresponding development time. Red arrows point from text labels to specific elements in the interface.

Reference Temperature

New Temperature

Reference Time

Compute Button

New Time

Other Times

70	71	72	73	74	75	76	77	78	79	80
00:08:04	00:07:38	00:07:13	00:06:50	00:06:28	00:06:07	00:05:48	00:05:29	00:05:11	00:04:55	00:04:39

# Chemicals - modification

This tab lets you maintain chemicals formulas.

Each formula is stored in a text file, you can open it by entering directly its name or selecting it with the rightmost button.

Formula file: name of the text file that contains the formula. This file is split in 5 sections containing the title ([Title]), formula type ([Type]), characteristics ([Characteristics]), comments ([Comments]) and the lines of the formula ([Formula]).

It is of course pretty simple to modify these files manually (via the Notepad or any other word processor that can write .txt files) but you should absolutely respect their simple syntax, among these the tabs between each column (also if the column is empty).

In doubt, to modify the formula, you've better to use the Formula tab that assures you a correct syntax.

**Formula title:** contains the text (15 characters max) mentioned on the process tab

**Formula Type:** contains the product type (developer, fixer, toner, ...)

**Product Characteristics:** contains the major product characteristics

**Comments:** This field contains whatever you like (use modalities, product danger, ...)

**Formula table:**

- First column contains the component
- Second column contains the quantity
- Third column contains an eventual comment

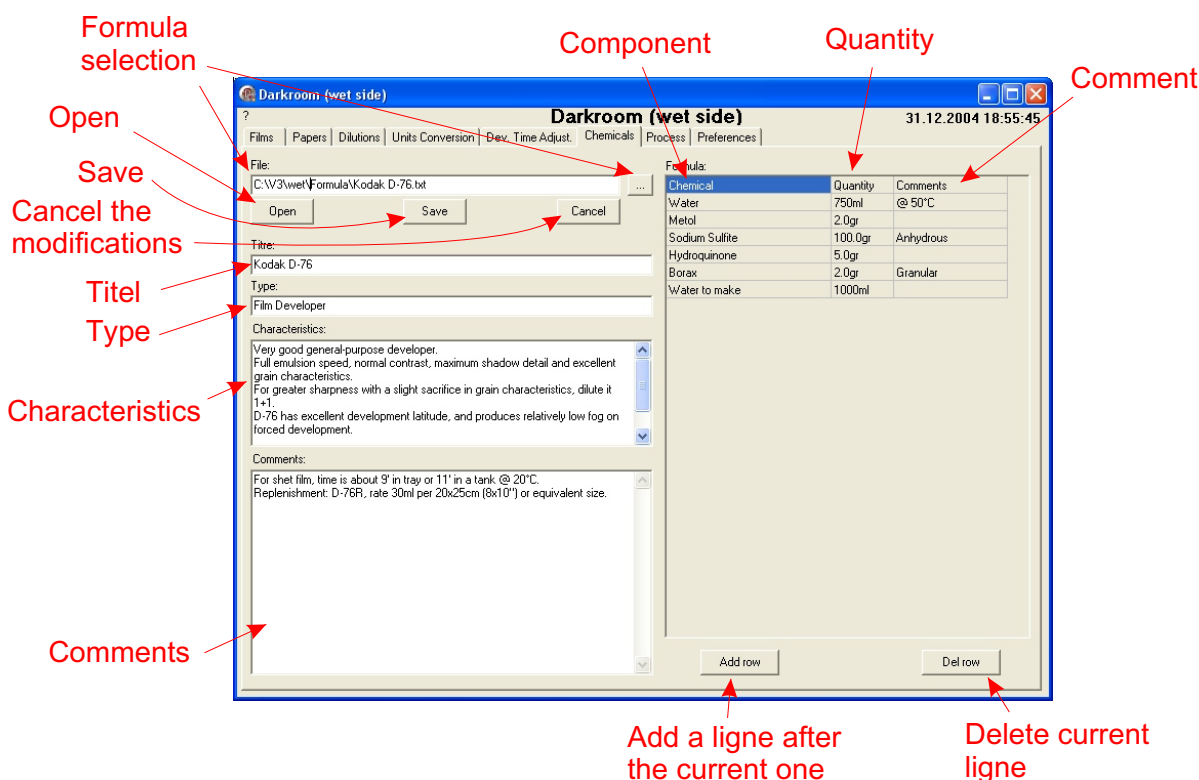
The buttons have the following functions:

“Add line”, add a line after the current line

“Del line”, deletes the current line

“Save”, saves the mods in the text file

“Cancel”, cancels the mods and reloads the tab from the text file



# Process - modification

This tab lets you maintain each process.

Each process is stored in a text file, you can open it by entering directly its name or selecting it with the rightmost button.

**Process file:** name of the text file that contains the process. This file is split in 3 sections containing the title ([Title] keyword), the comments ([Comments] keyword) and next the lines of the various steps ([Process] keyword).

It is of course pretty simple to modify these files manually (via the Notepad or any other word processor that can write .txt files) but you should absolutely respect their simple syntax, of these the times in the format "hh:mm:ss" (hours:minutes:seconds), the tabs between each column (also if the column is empty) and a "X" if there is a pause.

In doubt, to modify the process, you've better to use the Process tab that assures you a correct syntax.

**Process title:** contains the text (15 characters max) mentioned on the process tab

**Comments:** This field contains whatever you like (products, dilutions, temperatures, agitation, ...)

**The operation table** is the heart of the system:

- First column contains the step title
- Second column contains the step time
- Third column contains the drain time + the time needed to fill the tank with the next step product if needed
- Fourth column contains an "X" if the process should pause after this step

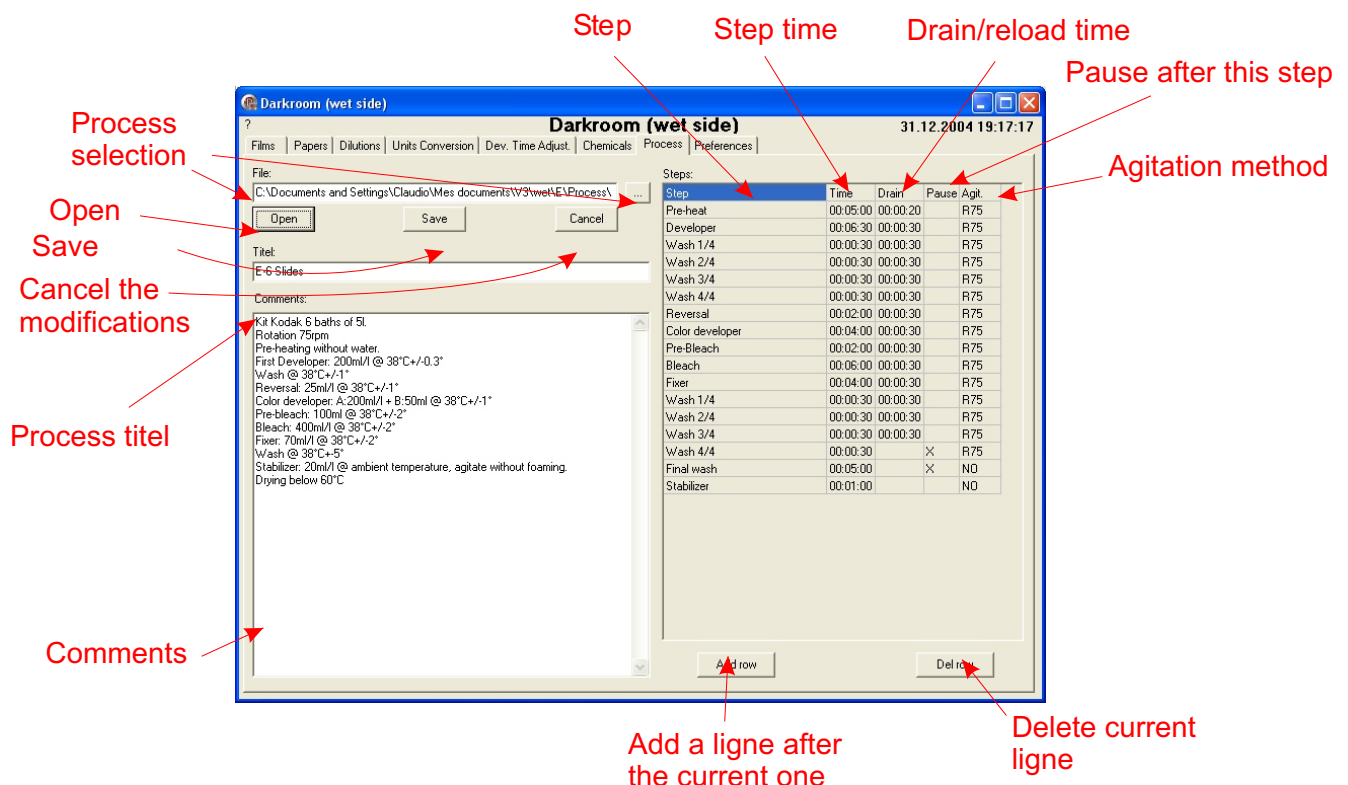
The buttons have the following functions:

"Add line", add a line after the current line

"Del line", deletes the current line

"Save", saves the mods in the text file

"Cancel", cancels the mods and reloads the tab from the text file



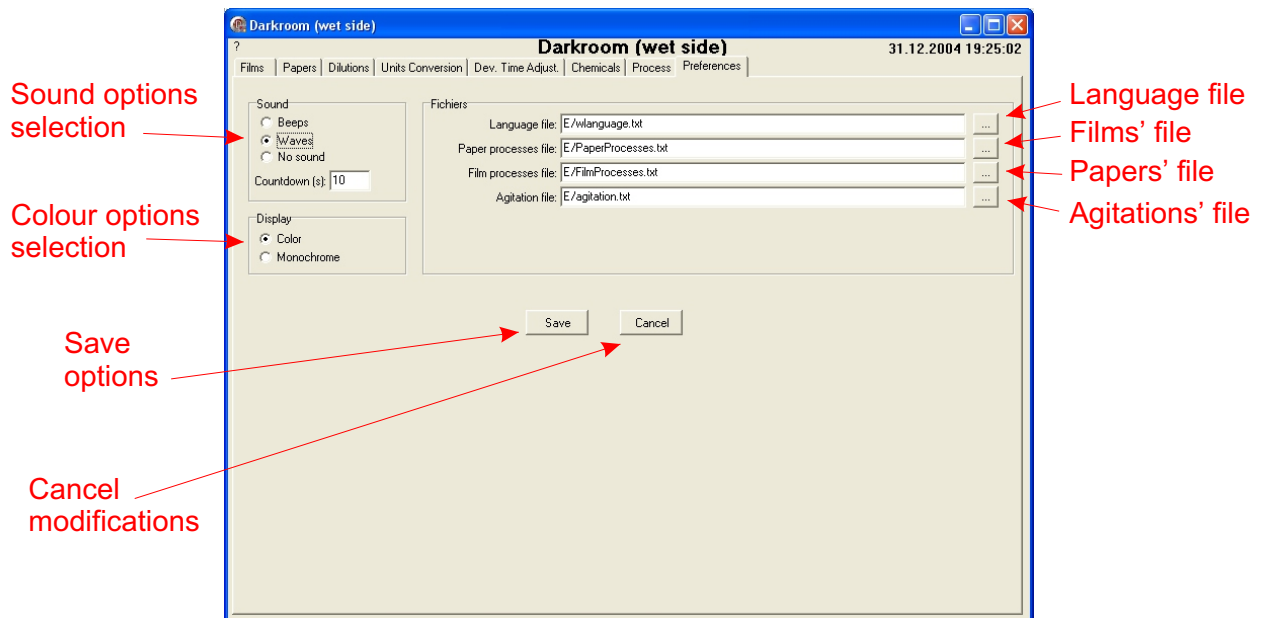
# General Options

This tab lets you modify the general options:

- Sounds: "beeps", spoken countdown (.wav file, sound card necessary) or no sound
- Colour: color or monochrome
- Language: software language
- File containing the language texts
- File containing the paper processes files list appearing on the paper's tab
- File containing the film processes files list appearing on the films' tab
- File containing the agitations' modes

The tabs are dynamically generated based on the files containing the processes list. These options are saved in the file "wsettings.txt".

The buttons "Save" and "Cancel" save or cancel the options.





# ***Configuration Files***

Various files contain the system configuration:

**wreadme.txt**

Installation procedure file.

**wsettings.txt**

Main program's configuration file.

**wlanguage.txt**

File containing the texts appearing in the program and used for the various languages translations.

**FilmProcesses.txt**

File containing the various film processes appearing on the tabs.

**PaperProcesses.txt**

File containing the various paper processes appearing on the tabs.

**agitation.txt**

File containing the various agitation modes.

**Various text files**

Files containing the development processes and chemical formulas.