EGITRON

Engenharia e Automação Industrial, Lda.

ControLab

Quality Control Software for Cork Products

User Manual

Manual version 3.4.0

Applies to versions 6.1.0 or higher

Exemption of Responsibility

This manual was produced and reviewed trying to describe as correctly as possible the ControLab (Quality Control Software for Cork Products) features and characteristics. Nevertheless this manual or Software can be changed without previous warnings. EGITRON – "Engenharia e Automação Industrial, Lda." does not answer for damages caused directly or indirectly by errors, omissions or discrepancies between ControLab and the instructions or descriptions contained in this manual.

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Windows and Microsoft are Microsoft Corporation registered commercial brands.

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Before requesting help to EGITRON, read carefully this manual, use the technical services of your company (if they exist) and/or use all the tools of auto-help that may have been put available during the acquisition of the product .

If you do not manage to solve the problem, you should contact EGITRON, through the contacts listed in this manual, indicating:

- Software acquisition date

- Software name and version

- Problem description and origin

- Error Message or similar that may appear

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1. Congratulations Notes

Congratulations for acquiring EGITRON ControLab – Quality Control Software for Cork Products. With this excellent Software you can create quality control reports integrating different tests and using equipments with automatic values acquisition as the MedCork, the InterLab, the TorsiLab or digital scales between a set of numerous equipments.

This manual will permit to obtain detailed information relative to the Software features.

2. About this Manual

This manual describes the functioning of ControLab – Quality Control Software for Cork Products, compatible with Microsoft Windows 2000/XP. This program was specially developed to permit the elaboration of quality control reports and holds a set of additional features that permit to manage and analyze the information archived in the reports. After this manual reading, the user will be ready to:

- Install ControLab Software and Database;
- Configure the various tables needed for the best use of ControLab;
- Manage, configure and print quality reports;
- Configure and register tests;
- Manage, filter and control the information archived in the reports;
- Use the modules included in ControLab: Statistical Analysis, Technical Files, Calibrations, Pending Tasks and Orders.

This Manual is composed by:

- ControLab User Manual (this document) – It provides a general perspective of the Software, its features and a brief description of its use.
- Installation annex – This Annex describes in details all the installation process of the ControLab Software and of its Microsoft SQL Server 2005 database.
- Specific Manuals of Tests – Annexes that describe in details each of the tests that the user can realize in the creation of a quality control report.
- Modules and Other Annexes – Annexes for the modules of the Software and specific features that justify a more detailed description than the one that can be found in the user manual.

An installation CD of EGITRON ControLab for PC is provided with this user manual.

3. Conventions

Messages

The messages are used in this manual to call the reader attention about important information. This type of message is identified as shown below.

Take care! A warning advice informs that the incorrect use of the Software or the non following of instructions may have severe consequences.

Please read carefully. A note is a suggestion or advice that helps to get the best of the program.

4. Introduction

The main objectives of ControLab are the elaboration of quality control reports for cork products and the storage of the data relative to the tests in a simple and safe way. Nevertheless, ControLab can't be seen just as a simple program for the elaboration of quality control reports, but also as an excellent tool for laboratories analysis and management. It also guarantees the interconnection with numerous automatic acquisition equipments.

This program is based on the database developing tools 'Microsoft Access XP' and 'Microsoft SQL Server 2005', adding an easy use and fast processing to a safe way to store data.

We list below some of the main characteristics of EGITRON ControLab.

- **Security**, the system is based on the technology of relational databases;

- **Friendly ambient**, proportioned by a nice and intuitive user interface, permitting to easily configure all the needed parameters;

- **Complete integration of different modules in a single program**;

- **Easy analysis and processing of store data.** The Software permits to access the information relative to the reports in an efficient and simple way, with an easy integration and sharing of all the information;

- **Multi-user ambient**. There may be different persons using simultaneously the Software from different PCs. For this, it is necessary to acquire the required user licenses;

- **Reports and Graphics Printing**, with the capacity to configure different aspects as for example the language and the tests to include;

- **Integration of automatic acquisition equipments**, as the MedCork, the InterLab, the TorsiLab, digital scales, hygrometers, Mitutoyo equipments, etc...

5. General Aspects of ControLab Features

The ControLab has a set of characteristics which understanding by the user permit a better use of the Software. Below we describe some of these main characteristics.

- **Based on tables**

The base structure for the database is a relational database; this is the fact that makes ControLab to have its main characteristics and advantages (security, data coherence, simplicity ...). One of the obvious consequences of this base for the Software is that it assents on a set of table of registers. The contents of these tables correspond to the registers needed for the system good behavior. We will describe, in another section of this document, the main tables essential to the correct software configuration.

- **Common Buttons: Edit, New, Delete, Close and Confirm**

These buttons are common to the main number of ControLab windows. The button "Edit" is for data changes security. By default, the presented data is protected and can't be changed. The button "Edit" will have to be selected for the user to be able to change the data. The button "New" permits to add one register and the button "Delete" permits to delete the current register. The button that permits to close the current window is the button that contains an icon showing a red cross.

Some windows of ControLab show a confirmation button with a suggestive icon. When this button is closed to the the closing button, this last one has the meaning of cancel.

Regarding the button "Edit", note that changes to a register are only saved in the database when the user unselect the status of edition (button "up")!

- **Selection Lists**

It is possible to verify that some of the fields have a little lateral arrow that indicates that the fields have an associated list from where you can

select one of its elements. It is possible to select the elements with the mouse or introducing the 1st character of the desired item. The items of the list are introduced in the tables relative to the field, normally identified as a similar name.

- **Double-click**

Double-Clicking in the selection lists associated to tables of configuration will ease the navigation between the windows in the Software. Indeed, when the user double-clicks in a selection list relative to a table, the corresponding window is opened.

- **Introduction of Dates**

In the fields for dates in ControLab, the user will only be able to introduce dates in the format defined in the Regional Settings of the OS Windows, accessible through the Windows Control Panel. To ease the insertion of dates and to reduce the risk of errors, there is the possibility to open a calendar double-clicking in the field.

In this window, you can select the year, the month and the day. To validate the date and to insert it in the corresponding field you must Double-click in the desired date.
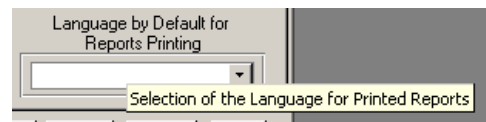
- **Required fields (bold)**

While introducing registers, some of the fields may be required, contrarily to others.
The required fields are normally presented in **Bold**.

- **"Tool – Tips"**

One characteristic common to the main part of the buttons, lists, fields, etc., is the existence of a brief indication that appears while pointing with the mouse to the referred object.

- **Important keys**

Another important aspect is the behavior of the following keys:

- o '**ESC**' – permits to cancel an invalid user operation.
- o '**Tab**' and '**Enter**' – used to navigate between the different fields.

- **Navigations Buttons**

At last, it is important to refer a set of buttons that permit, when available, to navigate between the registers of the respective window.

6. Configurations

As we have already mentioned in this manual, the ControLab base is the set of its configuration tables. This way, it is essential that the user correctly understands the set of configuration tables that are available.

An incorrect or incomplete configuration of the ControLab tables may origin a multiplication of the amount of work while creating reports and registers for the respective tests. Indeed, the configuration tables permit to define the main set of default values for numerous reports and tests parameters. If there tests are not correctly defined, they will have to be individually corrected report-by-report.

This way, the first step the user has to follow for the correct use of ControLab is the configuration of the tables. The main part of these tables is accessible through the menu "Tables". The others are accessible through the menu "Setup".

The required conditions for a correct and efficient configuration of the Software can be resumed in the following 2 points:
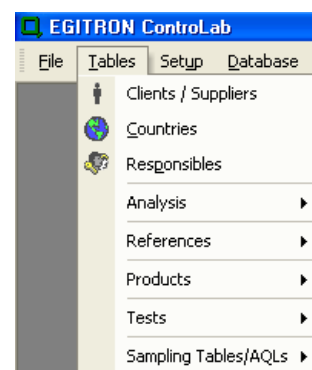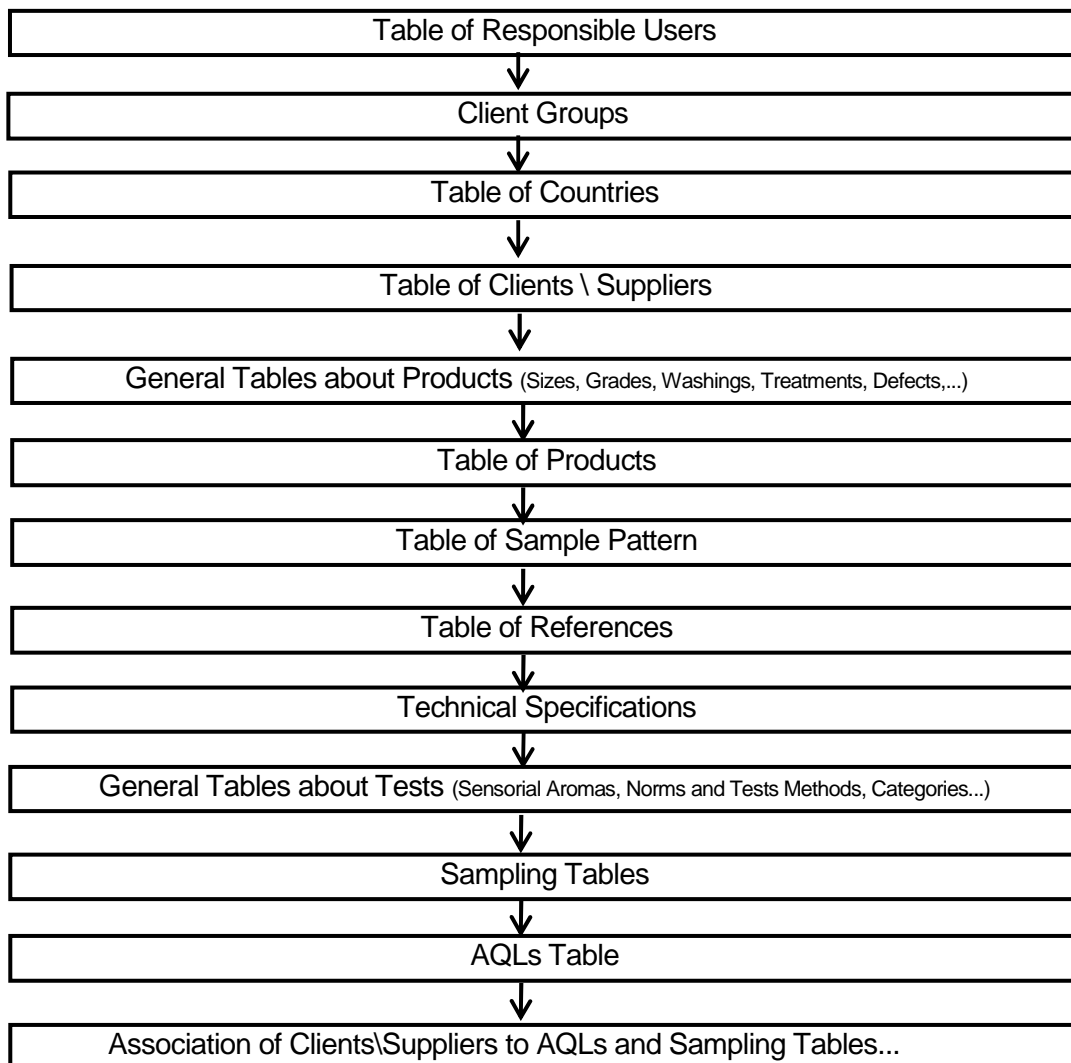
- Respect of the logical sequence for the configuration;
- Understanding of the information contained in the most important configuration tables.

In the next chapters, this manual will present each of these points.

6.1. Logical Sequence for Configuration

While starting to fill the configuration tables, the user will have to worry about guarantying that there is a logic sequence that permits him not to go back various times to the same windows and that guarantees him that he won't have to stop the configuration of a table because another one was not configured yet.

This way, the logical sequence suggested for the correct configuration of ControLab is as follows:

```
┌─────────────────────────────────────────────────────────────────┐
│                    Table of Responsible Users                     │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                          Client Groups                            │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                        Table of Countries                         │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                    Table of Clients \ Suppliers                   │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│   General Tables about Products (Sizes, Grades, Washings, Treatments, Defects,...) │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                        Table of Products                          │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                      Table of Sample Pattern                      │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                       Table of References                         │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                     Technical Specifications                      │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│  General Tables about Tests (Sensorial Aromas, Norms and Tests Methods, Categories...) │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                        Sampling Tables                            │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│                           AQLs Table                              │
└─────────────────────────────────────────────────────────────────┘
                                 ↓
┌─────────────────────────────────────────────────────────────────┐
│     Association of Clients\Suppliers to AQLs and Sampling Tables...│
└─────────────────────────────────────────────────────────────────┘
```

More detailed information about the configuration tables in this sequence can be obtained through the reading of the next paragraph of the manual.

The sequence suggested here is a sequence for the initial configuration. At any time, the user may proceed to the maintenance of the configuration tables, changing or adding registers since these operations are in agree with the security and coherence rules for the data guaranteed by the relational database.

6.2.   Description of some Configuration Tables

This chapter will describe the more important configuration tables required for a good behavior of the ControLab as well as the tables that may be seen as more difficult to understand for the user.

- **Table of Responsible Users**

The table of responsible users is very important since it is from this table that the ControLab users are identified as well as the operators in the laboratory responsible for the reports and for the tests that are being created.
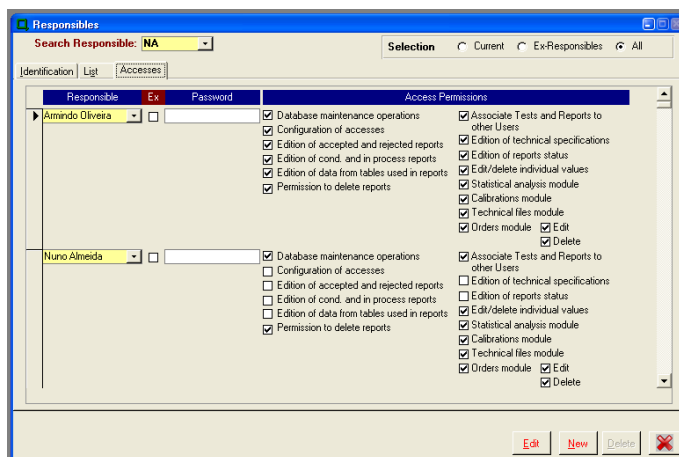
Besides the identification of the users, the software permits to define from the page "Accesses" of this window the configurations of access for each of them.

Regarding the Permissions of Access, the following can be defined, by user:

- **Database maintenance operations;**
- **Configuration of accesses;**
- **Edition of accepted and rejected reports;**
- **Edition of conditional and "in process" reports;**
- **Edition of data from tables used in reports;**
- **Permission to delete reports;**
- **Associate Tests and Reports to other users;**
- **Edition of Technical Specifications;**
- **Edition of reports status;**
- **Edit/delete individual values;**
- **Statistical Analysis Module;**
- **Calibrations Module;**

- **Technical Files Module;**
- **Orders Module (Edit and\or Delete).**

Another important feature of this window is the possibility to introduce the users' digitalized signature that may appear in the printed reports.

- **Table of Clients \ Suppliers Groups**

Easy to fill, the main objective of this table is to ease the definition of the configurations of the tests to realize by default.

While defining the clients groups, the user will have to remember that the objectives of these groups and of their association to each of the clients are mainly two:

- **Associate tests by default to the client group** (depending on the product);

    This means that when a report is created, the tests that will be associated by default are the ones that are defined for the respective client group and product.

- **Associate AQLs and sampling tables to the client group** (once more, it depends on the product).

    This means that whenever a report is created, the sampling tables and AQLs that will be associated to it by default are the ones that are defined for the respective client group and product.

The definition of client groups is required. If you don't want to differentiate the clients, you may just define one client group that will aggregate all the clients.

On the other side, if each client must be seen as a particular entity, a client group may be defined for each client.

- **Table of Clients \ Suppliers**

This table permits to register all the clients and suppliers that may be associated to quality reports.

Beyond the identification fields that must be filled (Name, code, group and classification as client, supplier or both), it is possible to introduce all a set of information fields associated to the client\supplier.

We underline the importance of the configuration of the following fields, due to their connection to other features of the Software:

- **Email**

  This information maybe used by the Software depending on the activation of the feature of the preparation of emails to the client and\or supplier associated to the report.

- **Reports sent via**

  When the field is filled, the information appears in the configuration window for the printing of reports. It may be used as a "reminder" regarding the way the report is sent to the client.

- **Address and Country**

  Depending on the printing configuration, this information may appear in the printed reports.

- **Language by Default for Reports Printing**

  The correct configuration of this field eases the choice of the language required for each of the reports since it will be automatically done by the Software (it is a choice by default that may however corrected by the user). This feature is particularly interesting for laboratories that print reports in different languages, for clients of different countries.

- **Table of Products**
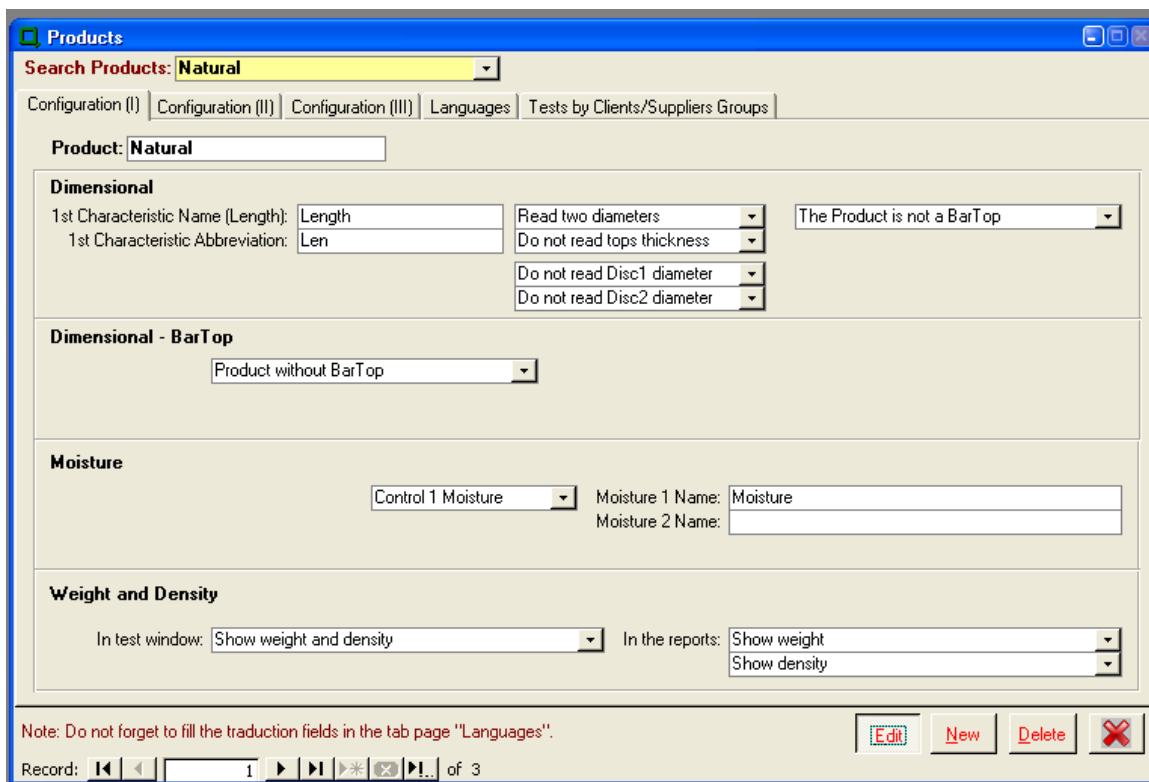
In a flexible way, ControLab permits to realize the quality control for different products. This flexibility is allowed thanks to the table of "Products".

Indeed, through this table, and at any time, it is possible to add a new product to the ControLab database.

This table permits, beyond identifying the products that may be controlled, the configuration of the essential parameters for the more important tests in ControLab. These configurations can be seen as configurations by default for each product, and may be corrected report by report.

The main configurations are the following:

- o **Dimensional Test Configuration**

    Name for the first dimensional reading (length), number of diameter readings, product identification (with discs, bar top, Agglo ...)

- o **Configuration of the moisture test**

    Number of readings, name for each reading, ...

- o **Configuration for the density test**

    Definition of the visibility of the weight and density in the printed reports and in the window of the test.

- o **Various Configurations related to the test of visual quality and defects**

- o **Identification of the different pressures for the leaking tests**

- o **Other Configurations**

    Configuration by default of the TCA Quantification Test, of the visual grades to use by default in the visual test, configuration of the extraction test...

Do not forget to correctly fill the translations of the main fields in the page "Languages". An erroneous translation or its lack may origin translation errors or empty fields in printed reports.

It is also through the table "Products", more precisely through the page "Tests" that will be configured the tests to realize and to print by default whenever a report is created for the selected product and for each client group defined in the table "Clients \ Suppliers Groups".
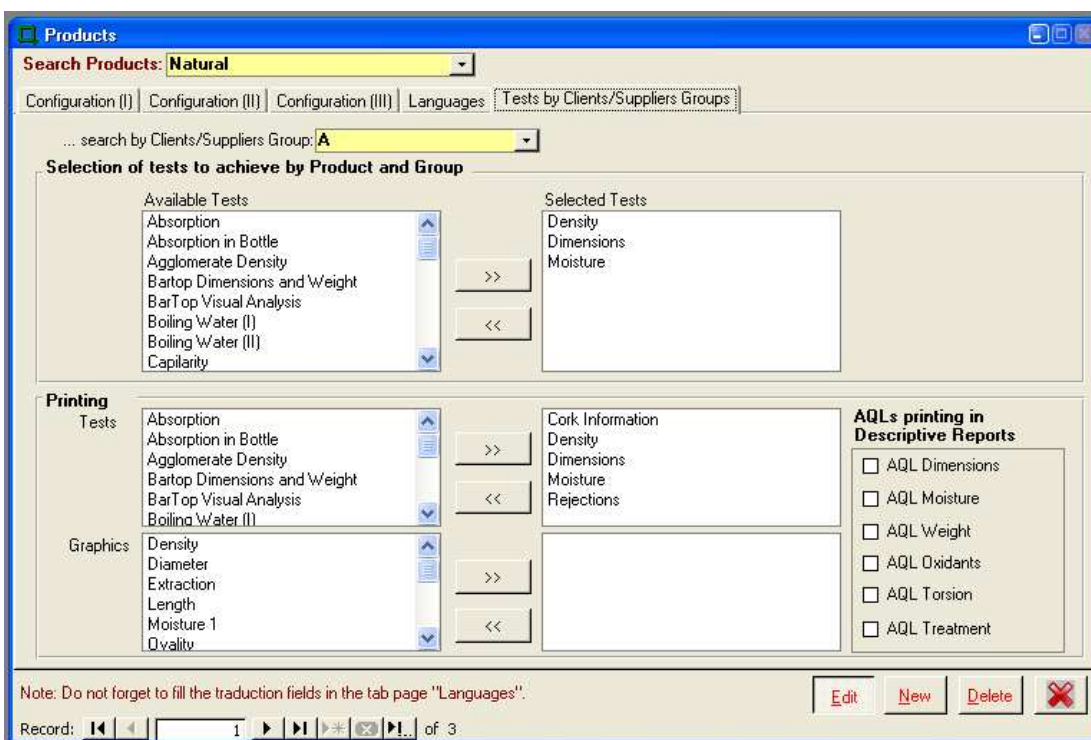
- **Table of Pattern Samples**

The table of "Pattern Samples" permits to define the set of the pattern samples used in visual tests and serves as "pattern" for comparison between the quantities found in the test and the pattern sample.
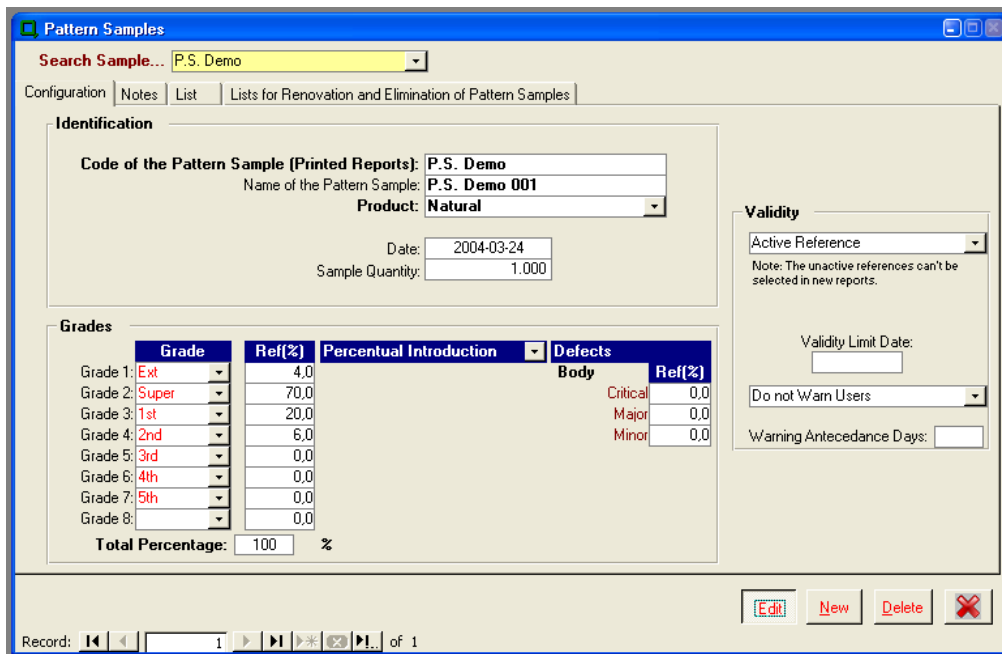
In fact, one "Pattern Sample" is identified by its code (normally an internal code for the laboratory) and is the aggregation in percent of different grades (until a limit of 8 grades).

The association of each pattern sample to a report is made in the same register as the visual test.

- **Table of References**
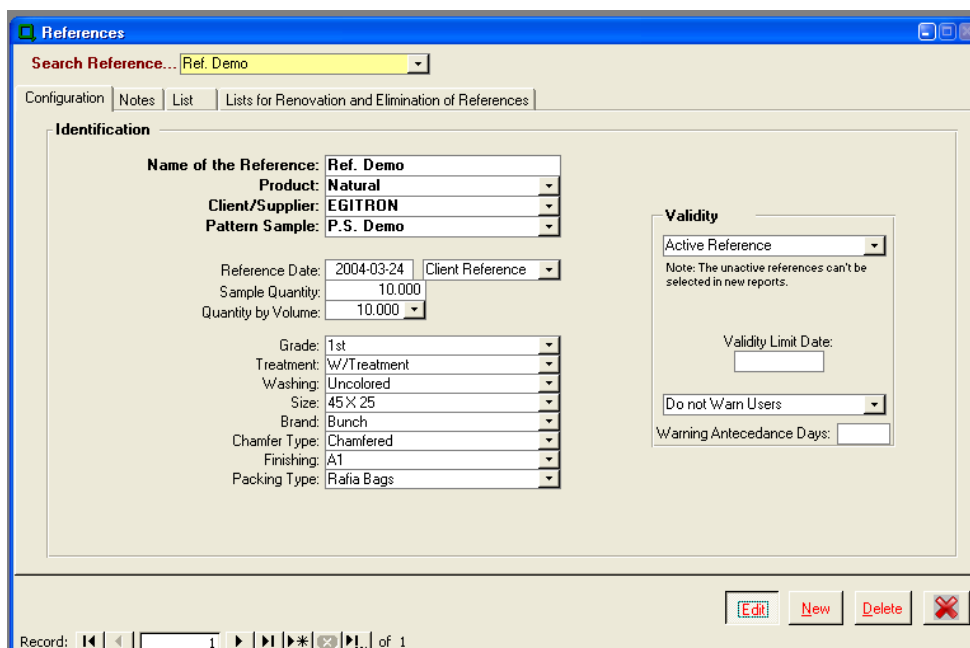
ControLab may work correctly without using the table 'references' but it may be useful.

One "Reference" must be seen as an entity placed one level above the "Pattern Sample".

Indeed, the register of a reference does not include only the pattern sample (the aggregation in percents of the visual grades) but also important characteristics about the product such as the grade, the washing, the size, the brand, etc...

The references may be defined as associated to a Client\Supplier or as internal (this means that they can be used for any client or supplier)

The objective of the definition of references is to ease the creation of reports. The user just has to select a particular reference to make the other configuration fields of the report to be automatically filled.

- **Table of Technical Specifications**
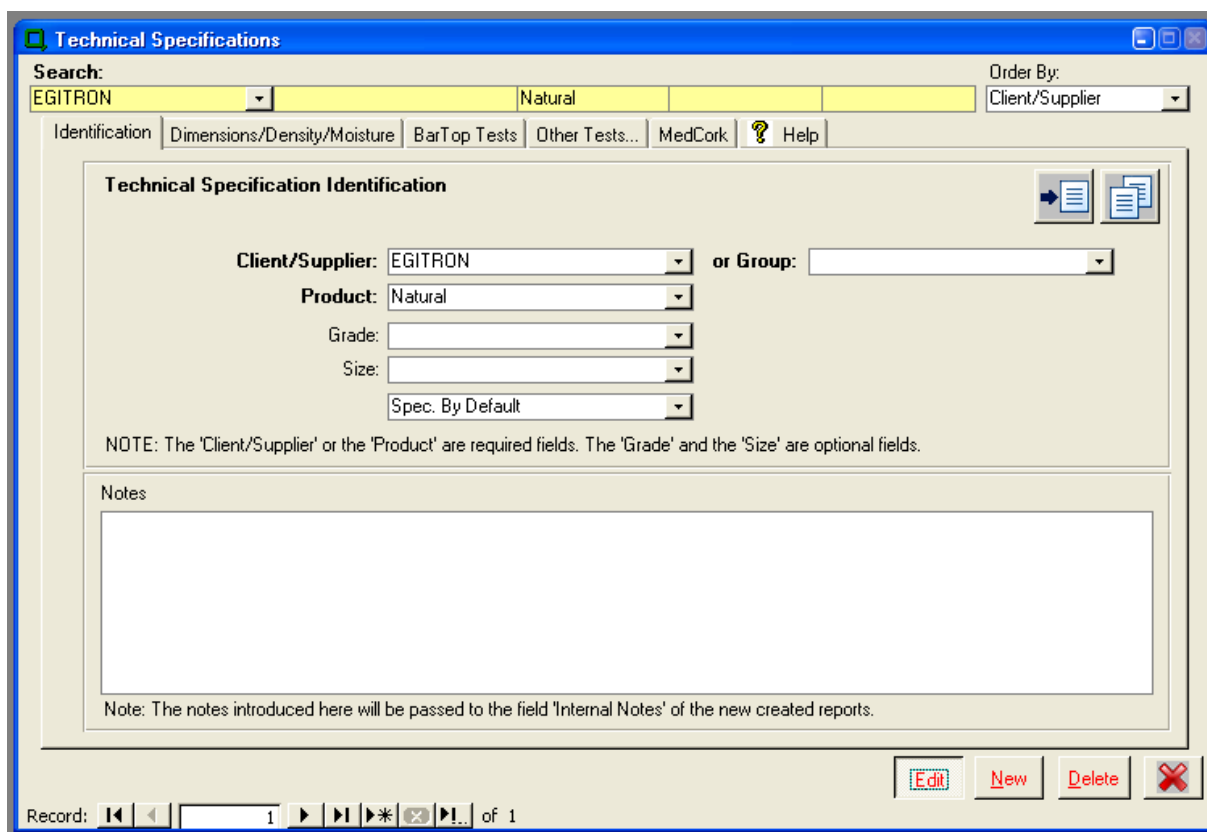
The table of "Technical Specifications" (definition of tolerances and nominal values "expected" for each of the tests) is one of the most important in the objective to reduce the individual configuration of reports and to privilege the configuration of specifications by default for the creation of reports.

Considering the technical specifications, the user should retain the following points:

- There may be an infinite list of technical specifications;
- Just one of them can be defined as being the "specification by default". All the others are "generic";
- There always must be at least one technical specification defined "by default";
- The specification "by default" is the specification that ControLab attributes to the report when none can be associated to it (this way, ControLab guarantees that each report has a technical specification associated when created);
- Each technical specification can be defined by: **Client (Or Client Group); Product; Grade and Size**.

  The main requirement is that one of the fields "Client" (Or "Group") or "Product" must be filled or the two simultaneously. Whenever a report is created, ControLab is going to try to find a specification to associate to it following the steps:

Step #	Client/Supplier (or Group)	Product	Grade	Size
1	X	X	X	X
2	X	X	X	-
3	X	X	-	X
4	X	X	-	-
5	X	-	X	X
6	X	-	X	-
7	X	-	-	X
8	X	-	-	-
9	-	X	X	X
10	-	X	X	-
11	-	X	-	X
12	-	X	-	-
Last Step: Select the Technical Specification by Default.				

"**X**" = Same   "**-**" = Empty

If a determined field is not empty, but the option selected is different from the one used in the Technical Specification, the Technical Specification is automatically out of the list of possible choices.

- This way, it is possible to define a technical specification by default for each product, filling just the field product and letting the specification defined as "generic". It is also possible to define a technical specification by default for each of the client, filling just the field client and letting the specification as "generic".

Another important objective of the technical specifications table is to configure the automatic acquisition from MedCork. It is trough this window that is defined the number of readings of the diameters, the positions for the moisture readings that MedCork will have to realize as well as the eventual orientation of the corks by the MedCork feeder (the SMA).
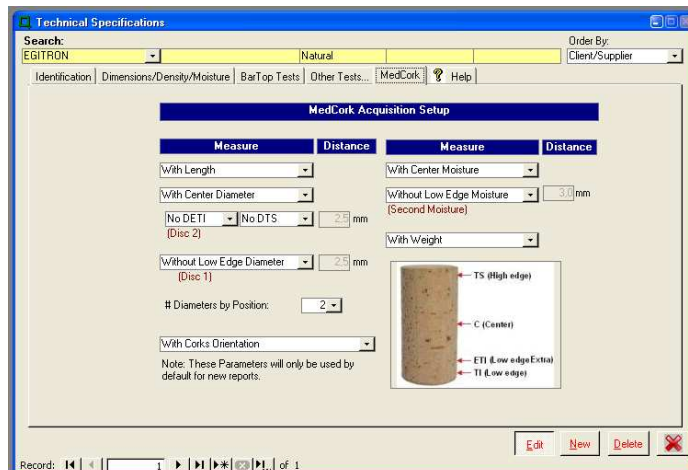
In the window of the technical specification, it is also possible to fill a field of notes which contents are automatically copied to the internal notes of the new created reports that use this specification.

To ease the management of the technical specifications, there are two buttons in the right-top pane of the window that permit the following operations:

- o **Duplication** – It permits the user to duplicate each of the technical specifications.
- o **Propagation of Values** – This feature permits to copy the values of the current specification (the user may choose the tests which values are to be copied) to one or different specifications already existing in the database.

- **Sampling Tables**

In ControLab, it is possible to configure various sampling tables, each of them being identified by its name given by the user.

The objective of the definition of the sampling tables is to permit to automatically attribute the correct sampling dimensions for each of the available tests in ControLab depending on the quantity of products defined in reports identification.

This attribution is realized by intervals. This means that whenever the quantity of products for the report is between a lower and higher value defined in the sampling table, ControLab will attribute the value defined in the corresponding register for each of the defined tests.

The choice of the sampling table that must be used for each report depends on the product and on the client group and must be defined on the table "Association of Clients/Suppliers to AQLs and Sampling Tables", described in the following paragraph.

The sampling tables permit to define sampling quantities by default. It is though possible to individually correct these quantities by report and test.

- **Association of Clients/Suppliers to AQLs and Sampling Tables**

It is through this table that the ControLab user can configure for each combination "Client Group \ Product" if ControLab must use AQLs by defect or admissible percents out of tolerances. In this table, it is also possible to associate to each combination the AQLs and limit percents that must be considered by default and the sampling table to use by default by test.
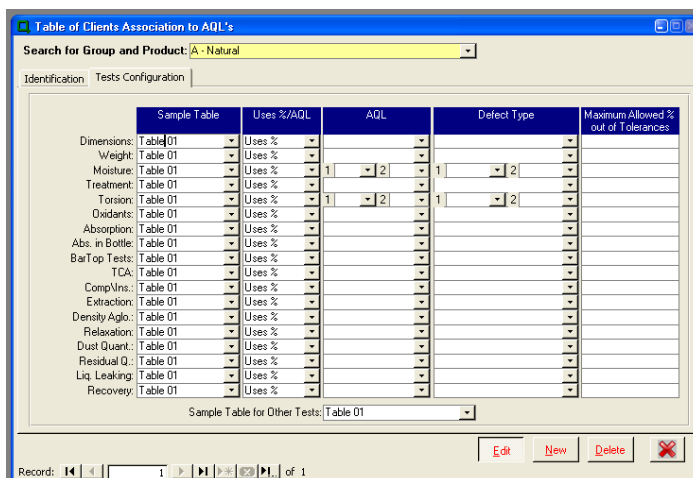
There may be configurations for each of the possible combinations ("Generic Groups") and also a configuration by default ("Group by Default").

While creating a report, the ControLab behavior will be as follows:

- **1st Step**: Try to find the configurations for the "Client\Supplier" and the "Product" of the report created to generate the tests;

- **2nd Step**: If the first step has failed (there are no configurations for the "Client\Supplier" and the "Product" of the generated report), use the configurations by default to generate the tests.

- **ControLab General Parameters Setup window**

The configuration window for the general parameters of ControLab permits the user to define parameters that will incidence in various aspects of the Software. It is very important for the correct use of the program that the user knows the data that can be defined in this window and the respective consequences in the use of ControLab. Some of the characteristics that can be configured in this window are:

- Automatic codification for the name of new reports;
- Various parameters relative to the reports printing;
- Configuration of the name for some fields present in the page of identification of reports;
- Automatic attribution of the responsible for the creation of the report;
- Specific configurations regarding tests, as for example the visual test, SPME\GC-MS and etc.
- Eventual use of the Software in "Terminal Service" (the reader should consult the specific paragraph from this document).

- **Window for the configuration of Tests Methods**

In this window the user may define, by product, the set of methods and norms used in the realization of tests. These values will be passed by default to the new created reports, with the possibility for the user to manually change the values.

- **Window for the configuration of Tests Names**

This window permits the configuration of the names of the tests and respective translations in the different languages.

- **Window for the configuration of decimal places**

It permits the user to configure, for some tests, the number of decimal places.

- **Window for the configuration of Warnings by Email**

The ControLab has a feature for the automatic creation of warnings by emails that are initiated when a report changes of status. In the window for the configuration of warnings by email, it is possible to define different configurations related to this feature:

- Activate/Inactivate the automatic warnings by email;
- Changes of the reports status that will origin a warning (report "approved", "rejected", "in process" and "conditional");
- Language of the email to be created;
- Send an email for a list of predefined email addresses;
- Also send for the Client and/or Supplier (when this option is not selected, the Software considers the address respective to the field "email" in the table of Clients/Suppliers.

Regarding the feature of sending emails from ControLab and because of its independency to third tools, for example Microsoft Outlook), it is necessary to fill the configurations relative to the SMTP Server (name, port and eventual authentication).

- **Brands - Pictures**
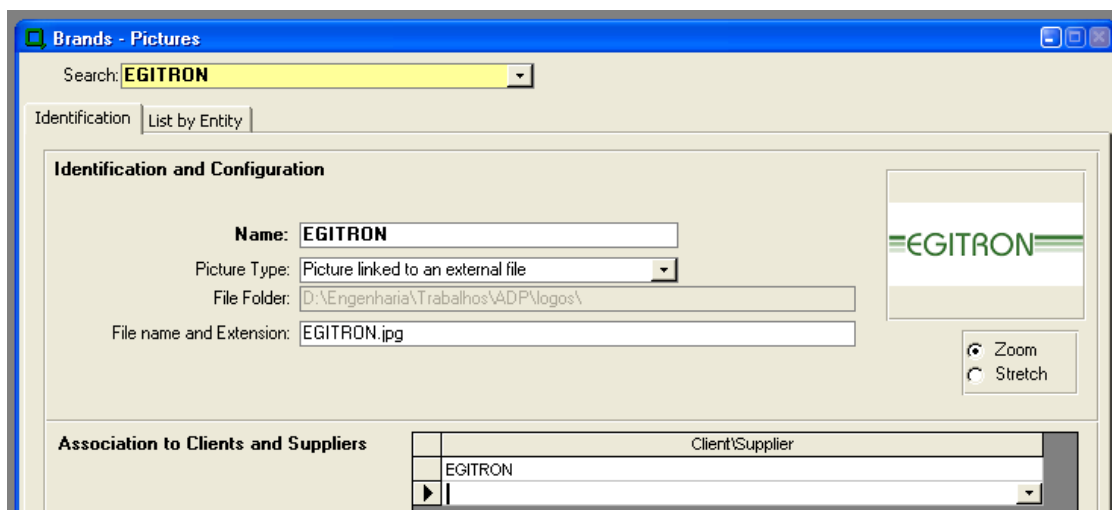
ControLab permits the administration and the inclusion in the printed reports of the brands pictures. The registry of the brands pictures is done from the specific table for this objective. In this table, it is also possible to associate each image to a list of clients\suppliers. It is important to notice the possibility to filter the registers by entity in the second page of the tabulator. The association of the image to each report is done from the window of identification of reports, selecting the corresponding name, with the possibility to filter the registers that are specifically associated to the client\supplier associated to the report (field "Spec.").

6.3.   Obsolete Configuration Registers

Most of the configuration tables (Clients\Suppliers, Categories, References, Sample Patterns, Sizes, Products, Grades, Washings, Treatments), permit its registers to be defined as "obsolete" (they are

defined by default as "current"), making them disappear from the different windows for register and analysis (Reports, Orders, Sample Patterns, References, Technical Files, Statistical Analysis, and Reports Status). This feature is partcularly interesting for registers that the user wants to delete but that ControLab does not allow because associated information exists in reports and tests.

6.4. Configuration of ControLab for use in Terminal Service

The setup process of ControLab is the same independently of its type of use (local PC or via Terminal Service). To get more detailed information about the installation and maintenance of the Software, the reader should consult the specific document produced by EGITRON.

Nevertheless, in order to guarantee the correct use of the Software in Terminal Service, some attention must be paid to the following configurations:

- The server needs as OS Windows Server 2003 or higher in order to permit the local RS-232 ports to be used;

- Activation of the Terminal Server use in the window of General Parameters Setup;
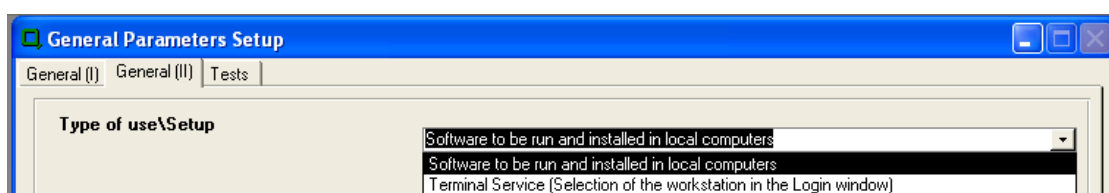
- Administrate and configure the workstations, creating a register for each PC from which a connection may be opened to the server (numerous configurations, namely the physical configurations of the acquisition devices are created by Workstation);
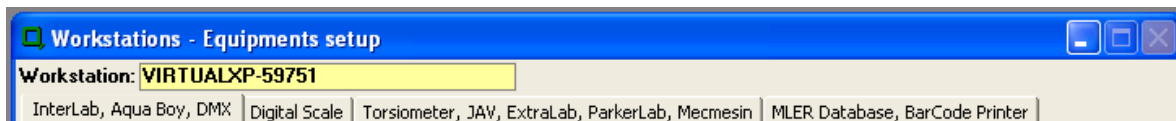
- In the Login window, select the workstation corresponding to the PC from which the connection is being done. Regarding the configuration of workstations, the user must pay attention to these points:
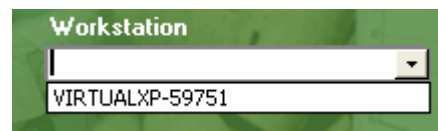
  o It is possible to define, by user, a default workstation, from the responsible table;

  o If in the table of workstations, there is a register with the same name as the local PC, this one is selected by default by the Software.

6.5.   Configuration of the Acquisition Equipments

Some of the physical tests (for example Dimensions, Moisture and Density, between others) permit the automatic values acquisition trough InterLab. This way, while clicking in the acquisition button, and if there is no error, a window for values acquisition for the respective test is opened. If an error window appears, the user should check the correct connection to InterLab and its parameters. For the case of the moisture reading through Aqua-Boy it is

necessary to check that the type of the used hygrometer corresponds to the correct configuration.

ControLab permits the connection and configuration of any type of scale for automatic values acquisition, since the scale permit a RS232 Connection. The configuration of the scale will have to define if it is directly connected to the PC or trough an

InterLab, the scale settings parameters and some other relevant information about the communication.
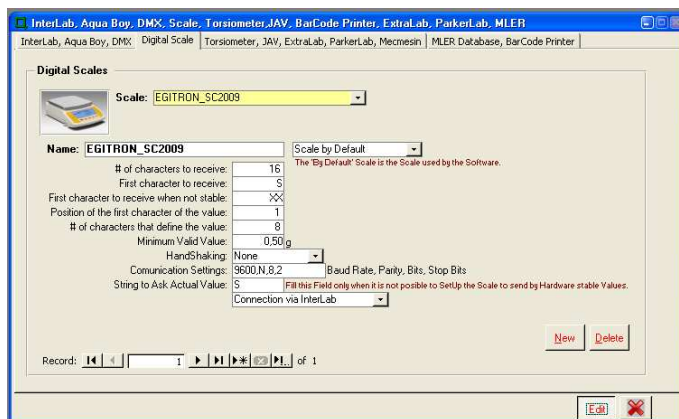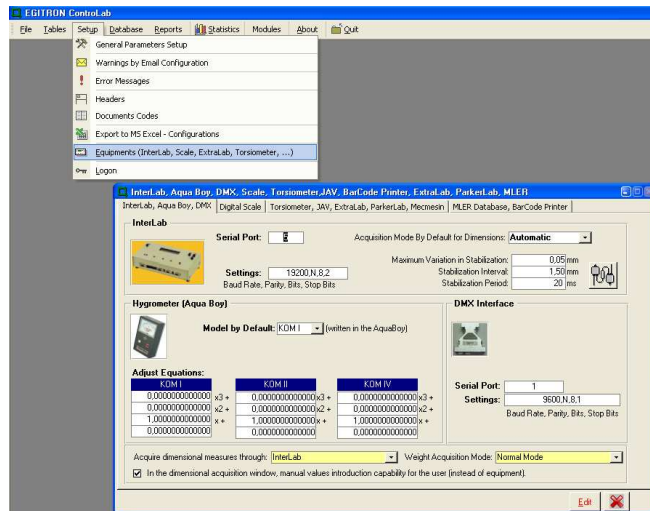
6.6.   Configuration of Translations

In the various configuration tables, there are normally fields for the translation of the different registers. It is important to realize this translation and it is strongly advised to do it in the moment of the introduction of the register to avoid the user to forget about it. We alert that an

| Portuguese | French | Spanish | German | Italian |
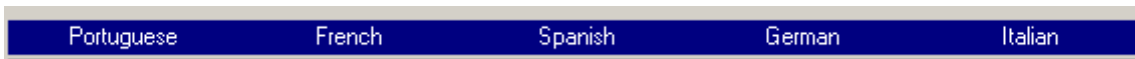
incorrect translation or even worse, the lack of it may origin translation errors or empty fields in the reports printed in the different languages.

6.7.   Other Configurations

Beyond the various configurations that have been described in the preceding paragraph, there are a high number of other important configurations.

The user may discover these configurations running through the various tables and the options that are available.
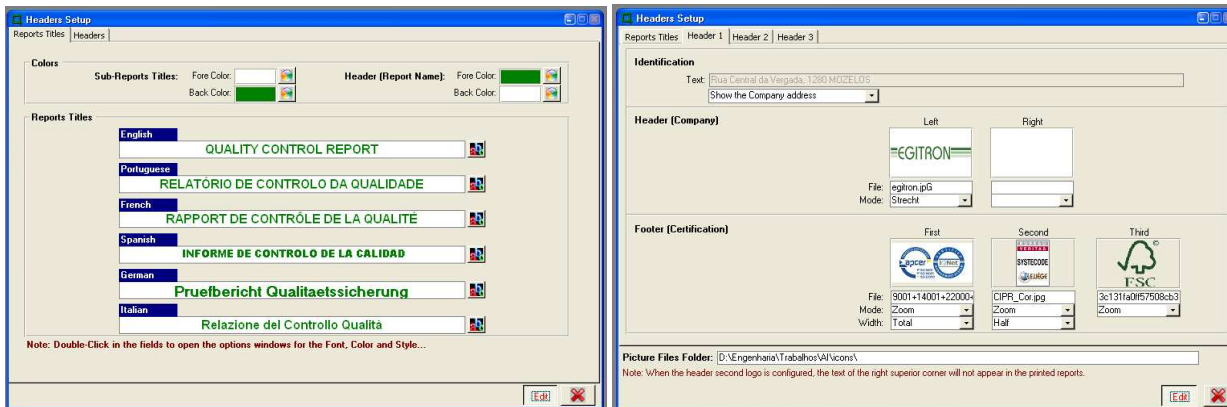
One example is the possibility to configure the reports headers for the different languages (Logotypes, Title, Colors, etc...), with the possibility for the user to create until three different headers (depending on the Software Acquisition License) that may be chosen before printing a report.

For each group of headers and footers, it is possible to configure a maximum total of 5 logotypes (2 for the header and 3 for the footer, with an adjustable with). The objective is to have a structure similar to the one illustrated by the following picture.
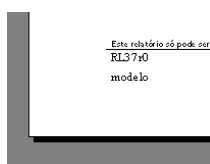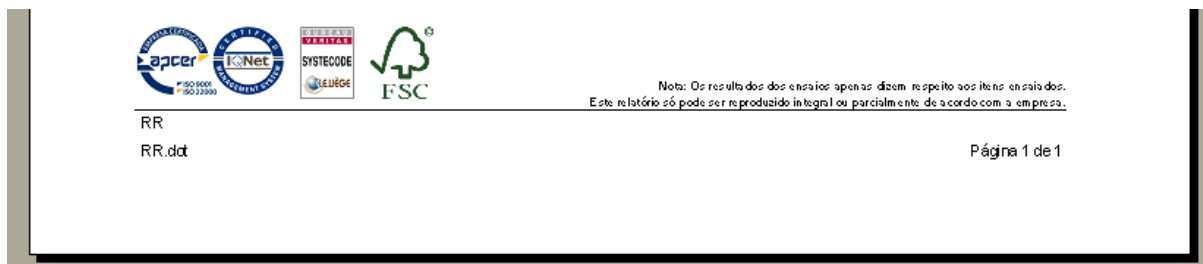
Another example is the table of configuration of documents codes that permit to configure for each of the report type the

codes that will have to appear in the left-hand bottom corner in the pages footer of the respective reports.

In order to ease the management of registers, some configuration tables of ControLab permit to print reports with the list of registers!

7. Reports and Tests

In the following sections and sub-sections, the manual will aboard the most important questions for the correct use of ControLab for the creation and register of reports and tests.

7.1. Main Window for Reports

The first step that must be realized by the user while opening EGITRON ControLab is the introduction of its identification and of its password to proceed to the user authentication by ControLab.

Next, if the authentication got success, the main reports window will be opened.

The superior part of the reports window permits to filter and to select the reports existing in the ControLab database. By default, ControLab will open the reports with the state "In Process" having a date contained in the 30 years before the current date.
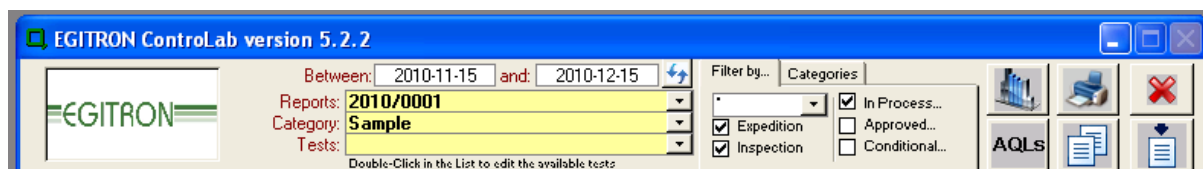
As it is possible to see in the picture, the possible filters for the reports to open are the following:

- o Temporal filter (between 2 editable dates; by default, open the last 30 days);
- o Filter by Product (selection list below the field "Filter by..." (* for all));

       o   Filter by Type (reports for expedition, reports for reception);

       o   Filter by State ("In Process", "Approved/Rejected", "Conditional");

       o   Filter by Categories...

Whenever one of the filters modified, the list of the reports opened in the window is also modified. The user, at any time, can also use the refresh button in the right of the date filter fields to refresh the presented information. This feature may be more usefull in case of simultaneous users.

The selection of a particular report in this list will be realized through the "Selection List" defined by "Reports:"

Whenever a user tries to find a report and do not find it in the selection list, he will have to check the various filters of selection! Indeed, an incorrect configuration of the filter may origin the fact that the report is invisible for the user!

Below the superior part of the filters and selection of reports, the ControLab main window is also composed by a "tab" that may have two or three pages.

- The first page is the report identification page contains all the fields that describe this report, some are required (Number, category, product, client, date...).
- The second page contains resumed information relative to the tests associated to the report (test name, current state, data, used method, sample dimension, result and associated responsible).
- The eventual third page presents the information relative to the selected test for the current report (the third page only is visible if a test has been selected).

7.2. Associate \ Select Tests

After having selected a particular report, the user has two ways for selecting one of the tests associated to it:

- The user may use the "Selection List" present in the top pane of the reports main window.

- It is also possible trough the list of tests associated to the report double-clicking in the field "Test".

  In the third page of the same tab the information relative to the chosen test will be opened. Using the horizontal scrollbar from this window, it is possible to consult the internal notes for each test of the report.

As already indicated in this manual, the tests that are associated by default to a specific report when this one is created are the tests defined in the configuration window of "Products", in the page "Tests" for the product and client group defined in this report.
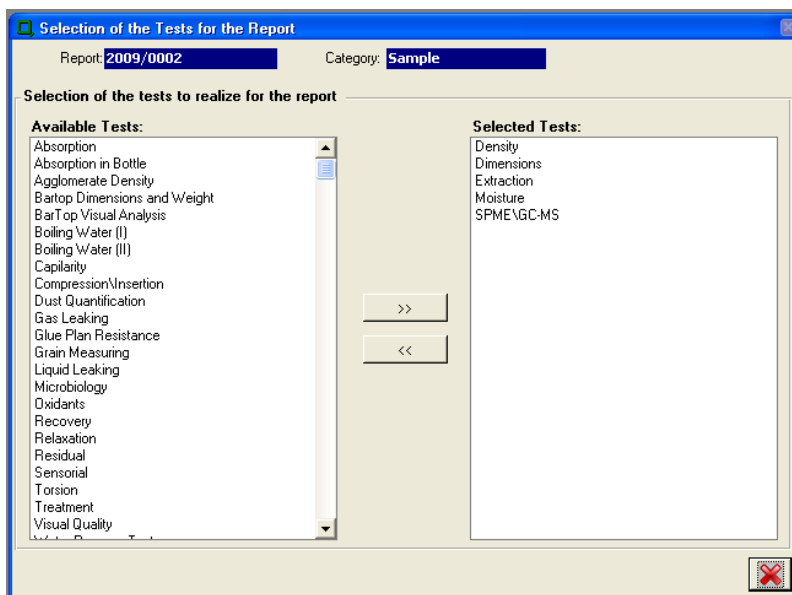
The user may correct this list for the particular report (without changing the configurations by default), selecting or unselecting tests. The window for tests selection is accessible through the button "Select Tests" from the page "Tests List" of the main reports window or double-clicking in the selection list of the tests in the main reports window.

7.3.   Tests

ControLab permits the realization of the following tests:

- Absorption;
- Absorption in Bottle;
- Agglomerate Density;
- Bartop Dimensions and Weight;
- BarTop Visual Analysis;
- Boiling Water (I);
- Boiling Water (II);
- Capillarity;
- Compression\Insertion;
- Density;
- Dimensions (Length/Diameter/Ovality);
- Dust;
- Extraction;
- Gas Leaking;
- Liquid Leaking;

- Glue Plan Resistance (Bartops);

- Grain Measuring;

- Microbiology;

- Moisture;

- Oxidants;

- Relaxation;

- Screw Caps;

- Sensorial;

- SPME\GC-MS;

- Visual Quality;

- Recovery;

- Residual;

- Torsion;

- Treatment;

- Water Pressure Test (WPT).

In this section of the manual, we will describe the main characteristics common to the different tests of ControLab. Indeed, with the objective to ease the register of values for the different tests, a

common structure was adopted, when possible, for all of them.

To get more detailed information about a test of ControLab, the user should read the corresponding specific user manual.

The common structure for the ControLab tests normally includes:

- **Table of individual values**

  Values introduced through automatic acquisition or manual register.

- **Statistical Values**

  Calculated through the individual values (Maximum, Minimum, Average, Standard Deviation, Range...)

- **No Conformities**

  Depending on the configuration, the no conformities may be the number of products with values out of specifications limits or the corresponding percentage.

  It is possible to see, in the grid of individual values of the different tests the registers that correspond to no conformities, using the specific button for this feature that will permit to make the no conform values to appear with a red background and a yellow foreground. A text with the identification of the indexes of no conformities will also appear.

- **Fields of Date, Method, Sample, Result, Responsible**

- **Comparisons of different categories**

  For reports having the same code but different category, the results obtained for the same tests may be directly compared through the button of comparison that will open a window with the various results obtained by category.

- **Notes**

  For each test (as well as for each report), it is possible to introduce internal notes as well as notes for printing (for each of the different languages).

  The notes shown in the test window are notes for internal use.

  To introduce or to access the notes for printing on different
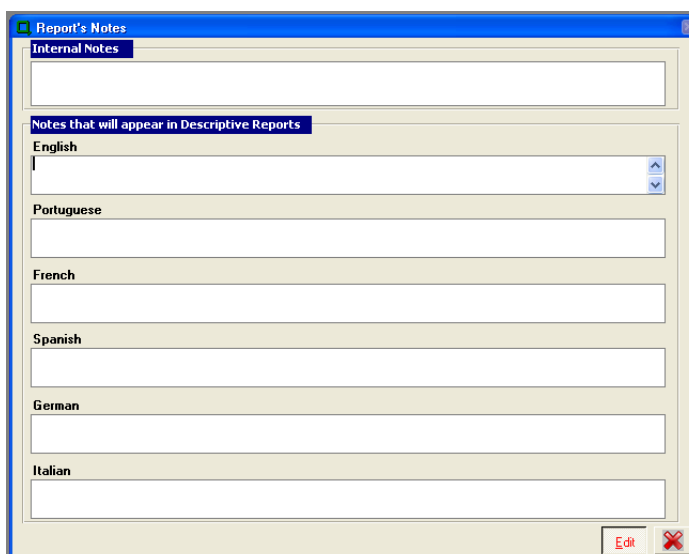
languages, the user will have to double-click on the field "Internal Notes".

- **Additional Information for the Reports Identification**

  For each report, besides the notes that the user may introduce by test, and the notes relative to the final result of a report (internal and for printing), it is also possible to introduce additional notes that will be printed in the grid "identification" of the report. Double-clicking in this field, the Software opens a window for the introduction of translations. Note that whenever this field is filled, it will then appear in printed reports.

- **Repetition of Tests**

  At any time, the user may repeat any test associated to the report.

  The insertion or elimination of tests is possible trough the use of the buttons "**New Test**" and "**Delete Test**" accessible in each test.

  The navigation between the tests of the same report must be realized through the selection list created for this effect and normally located in the left-hand superior corner of the test window.
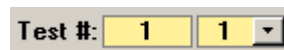
  There is also a button that permits, if there is more than one test, to change the position of the current test to make it become the last (highest index).
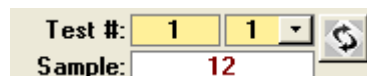
  This feature is particularly usefull since the tests considered for printing and for the statistical analysis module of ControLab are always the last created for each of the reports (highest index)!

- **Exportation for Excel**

  The exportation of the tests individual values for excel is possible through the use of the button existing in the window of each of the tests.

  The files will be copied to a folder previously defined.

  For this, the user must use the menu "Setup\Export to MS Excel - Configurations", and introduce the PATH in the field relative to the localization of created reports.

- **Feature to colour in red the values out of limits**

  In the window of some tests, there is a button that permits to colour in red the values out of tolerances in the grid of individual values. This feature is only available for windows and not for printed reports.

7.4.   Automatic Acquisition

EGITRON ControLab permits the automatic acquisition of values from different acquisition equipments, for the main number of tests available for each report.

A description of the automatic acquisition for the different available equipments is given in the specific user manuals for each test.

The Software permits the automatic acquisition from the following equipments:

- MedCork;
- ExtraLab;
- ExtraLab Champ;
- ExtraLab Plus;
- MecMesin (Portable ExtraLab);
- TorsiLab / Torsiometer 2000;
- MLER;
- JAV Machine;
- ParkerLab;
- Calliper / Digital Indicator Table;
- Hygrometer;
- Digital Scale.

Regarding the acquisition of values from MedCork, it is important to refer that it is done from the Software of control of the equipment that exports the values directly to the ControLab's Database. In the second page of the reports' identification window (tests pane), there is a button that permits to update all the reports with pending individual values from MedCork. | Pending from MedCork |

Beyond this, after the update process of a report with values from MedCork, ControLab checks if there are others

EGITRON ControLab

? There are other reports with pending values from MedCork. Do you want them to be updated?

| Yes | No |
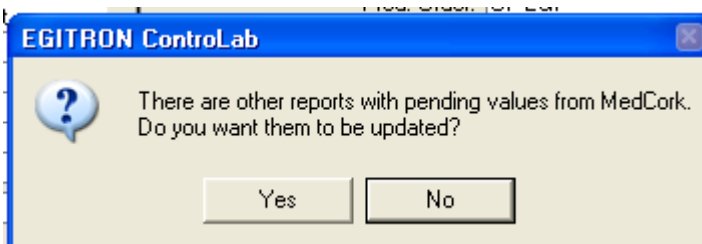
pending reports, and, if so, it asks the user if he wants to update them.

7.5.   Reports Duplications

From the button shown in the right-top pane of the window of reports, the user may access the feature of duplication of reports.

Any created report will have the same information as the initial report except, obviously, the name or the category of the new report that must be introduced by the user. If the user wants to duplicate the information relative to some of the tests only, he may select them from a list corresponding to the tests associated to the report.

The user can define if the reports and tests created as a copy must be considered or not in the statistical analysis module (activation field with a colored histogram as icon).

When the duplication finishes, the two reports (the initial and the copy), do not have any common data, and, for this reason, any change of data in one of them will not imply any automatic change in the other. Despite this, the Software permits the user, at the end of the duplication, to create an association between the two reports in the tree structure (Traceability feature for the reports).

7.6.   Importation of values from Reports

Using a button present in the right-top pane of the main window of reports, the user may import values from one or different tests from a list of different reports existing in

ControLab for the current report (destination). The values from the original reports are compiled in the final report.
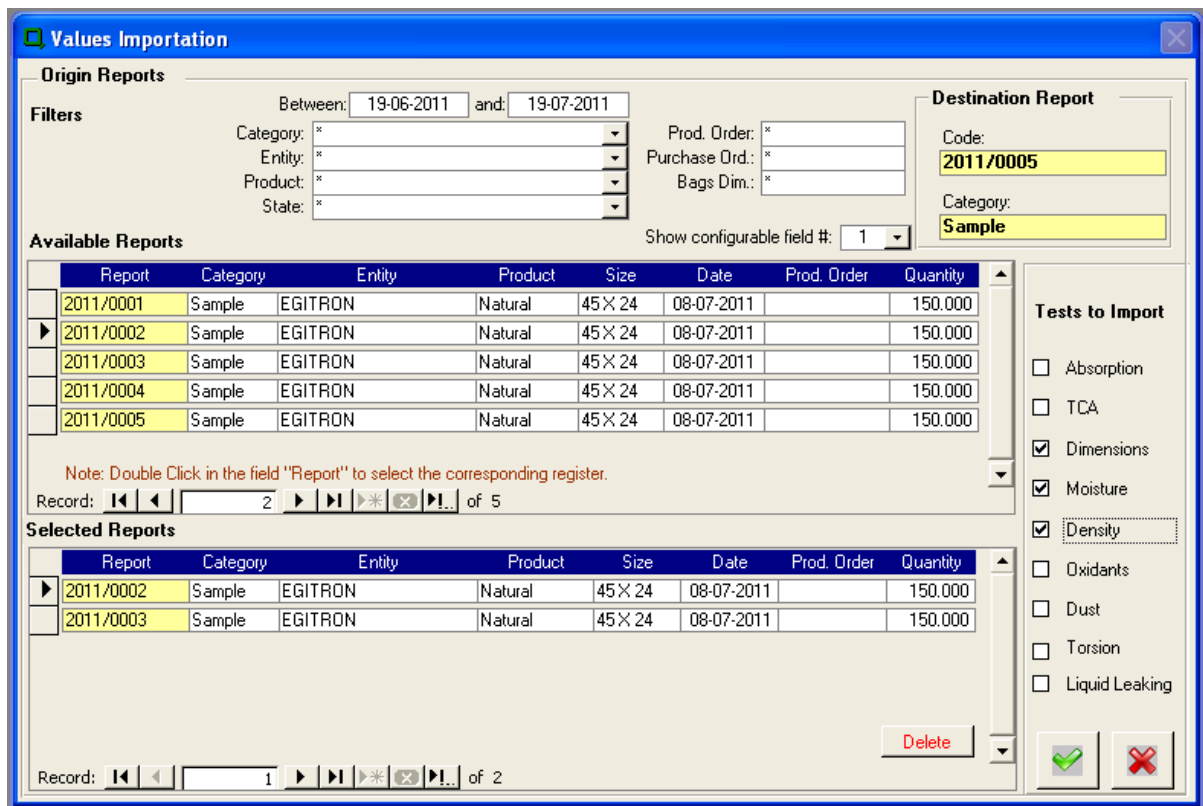
The structure for the window of importation of values is as follows:

- The upper pane of the window shows the filters for the list of the available reports (temporal, by entity, product, etc…);
- In the center and bottom of the window there are two lists of reports:
    - The first with the available reports and that depend on the selected filters;
    - The second with the reports effectively selected from the list (the selection of each report is done with a double-click on the field "Report" in the list of availbale reports).
- In the right pane of the window, there is a list of tests that permits the user to select the ones that are to import.
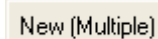
There is an useful feature that permits to select which of the three configurable fields of ControLab may appear in the two lists existing in the window of values importation (the latest configuration is kept in memory).

7.7. Sequential Creation of Reports

Using the button "New (Multiple)" in the window of reports identification, it is possible to create a list with the identification fileds that are required to create reports in ControLab. This list, if confirmed, permits to sequentially create these reports. The list is kept in memory, allowing the process to be repeated at any time.

List of Reports to Create

Report #	Category	Product	Date	Size	Quantity	Client/Supplier	
	Sample	Natural	19-07-2011	45 X 24	150.000	EGITRON	A
	Container	Natural	19-07-2011	49 X 24	450.000	EGITRON	A
			19-07-2011				

O campo "Relatório Nº" deverá ficar em branco caso se pretenda manter a atribuição automática do nome sequencial aos relatórios assim criados.

7.8. Acceptance \ Rejection of Tests and Reports from AQLs or tolerated %

For any of the reports, it is possible to define if the acceptance or the rejection for each of its test is realized from AQLs or admissible percentages. The configuration by default is defined, as already referred, in the window of association of clients to AQLs.

This configuration may nevertheless be realized, report by report from the button "AQLs" in the right-top pane of the main window of reports.

The button permits to open a window that identifies for each of the tests of the respective report if the user wants to use AQLs or tolerable percentages in order to accept or reject the respective test.

Depending on this configuration, ControLab will accept or reject each of the tests from the moment that they are finished.
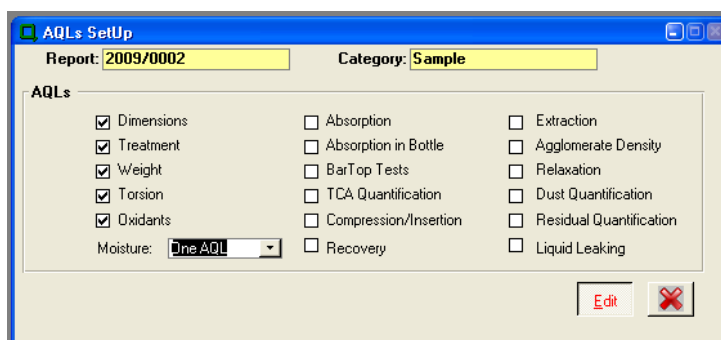
The result of the test itself will be updated, according to the following rules:

- If there is a rejected test: **Conditional Report;**
- It there are not any rejected tests and at least one test "in process": **Report "In Process";**
- If all the tests are approved: **Report Approved.**

The automatic atribution of a result for each of the tests and reports depends on the selection of the field "auto?" present in the different windows closed to the identification of the result of the test itself. It the field is not selected, the atribution of the result is not automatic any more. Note that manually changing the status of the result, the field "auto?" is not selected any more.

Besides the status "In process", "Conditional", "Approved" and "Rejected", there is also a non-exclusive status of "Ex-conditional" automatically activated (but the user may edit it) whenever the result switches from "Conditional" to another status (in the reports status window, it is possible to filter the "Ex-Conditional" reports).

7.9.   Categories for the Reports

An useful feature is the possibility to create reports with the same name, but with different categories. The category of the lot corresponds to its status at the moment that a quality control is realized on it. Possible options are reception, submitted, container and etc. When the Software detects that a specific report has already been realized but with a different grade, a button in the different tests permits to realize the comparison of values (statistical) between the different grades.

Using the categories table, the user can define the number of days that separate, by default and by category, the inspection and expedition date from the report date.

7.10.   Rejections

From the page of identification of reports, it is possible to access a window that permits to manage the rejections that have eventually been associated to a report. It is then possible to add a new index of verification for the report, where the previously rejected tests may have been changed to approved, without loosing this information.

7.11.   List of Changes to the Finished Reports

From the moment a report is finished (the status "Approved" or "Rejected" is associated to it), and if this option is active in the window of configuration of the general parameters of ControLab, the Software will keep the history of the main changes applied to the report and that occur after this. Each register of change includes the identification of the change, the date-hour, and the identification of the user that has made it. The changes controlled include the changes on the reports identification fields, as well as the status of tests. To guarantee the consistence of the information from this list, the fields included can't be edited.

7.12.   Traceability

The window of traceability permits to create associations between the reports, indicating that a specific report (lot) has originated or has been created by various reports. This feature permits to show, by the use of two "trees", one for descendant and the other for ascendency, the origin of a specific report. The refereed association trees permit to show until five levels of hierarchy.

7.13. Barcodes Labels

Besides the different types of reports that can be created in the Software, and that that will be described in this manual, there is the possibility to print barcodes labels, with the information relative to the identification of lots.

To get the best of this feature, the user should use the following equipment:

- A Label Printer;

- A terminal barcode reader.

After the correct configuration of the name of the labels printer in the window for the configuration of the acquisition equipment, the report identification labels can be printed, from the printing configuration window. The user may indicate the number of labels to print. The labels have the format 9,50 x 9,50 cm! After the labels are printed they can follow the lots and the corresponding report can be easily found by using the window "Search by Code" available from the menu "Reports". This window receives the inputs of the barcodes reader and when a valid code is introduces, the respective report is automatically opened.

7.14. Window "Reports Status"
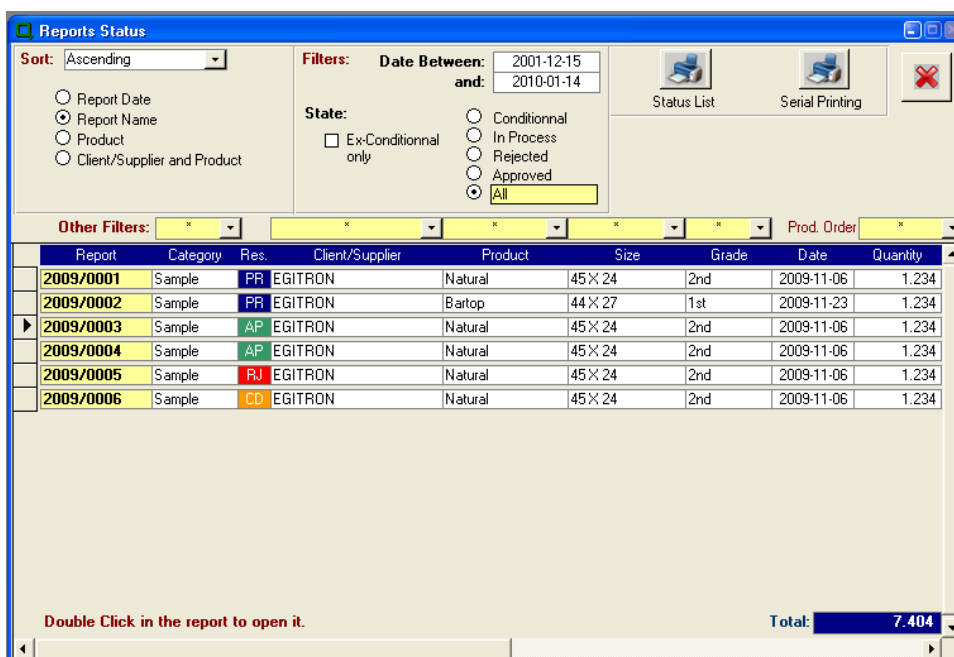
This window serves to make a resume evaluation of some general aspects of the reports saved in the database. It includes a set of different filter options in order to permit to extract some information relative to the realized reports (between dates, by status, category, client, product,

size, grade,...). There is also a button for the search result printing. It the user double-clicks the field "code", the corresponding report will be automatically opened.

The user should notice that the list includes the identification of the status of the report, with an abbreviation. This abbreviation is configurable in the table of the names for tests results.
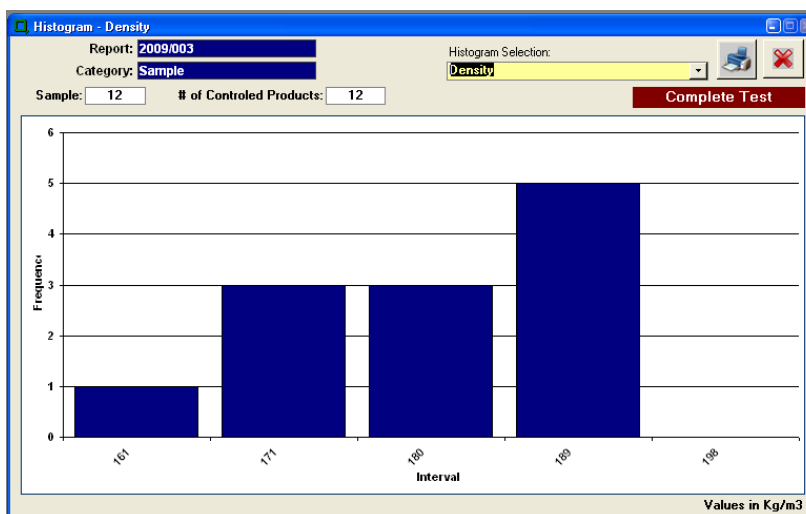

7.15. Histograms

There is in the header of the reports main window a button to open the window for the visualisation of histograms. In this window, the user may select the histogram for the required characteristic and test. The user may also print the required histogram.

8. Reports Printing

The window for the printing of reports can be opened from the Menu "Reports" \ "Reports Printing" or still from the button including the picture of a printer in the top pane of the main window of the reports.

Note the possibility to automatically fill the field of notes for the printed

reports (and translations) in the General Parameters Setup window.

8.1.   Types of Reports

There are three types of reports; each of them can have different configurations, with more or less information and more or less tests:

1. **Descriptive Report**
2. **Resume Report**
3. **Results Reports**

The **descriptive report** is a report that presents the statistical data obtained for each of the tests realized and it is the test that contains more information about the tests.

The **resume report** has the same objectives as the descriptive report but shows the data (in less quantity of information) in a resume table, permitting to get a report using less space in paper.

Contrarily to the other two types of reports, the **results reports** do not have as objective to show the statistical and resume values of all the tests included in the report but to show the set of all the individual values obtained in a specific test. This way, there is a result report for each of the tests with individual values.

8.2.   Possible Configurations
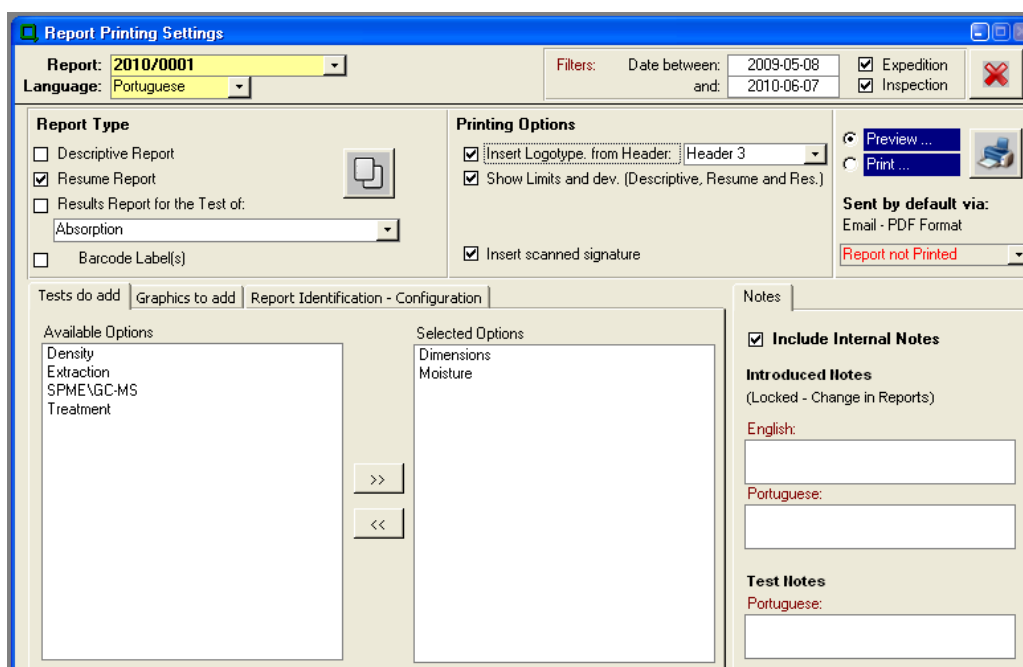
Before starting the printing, the user may, besides selecting the required type of report, configure the main characteristics of these reports, as:

- The required language for the report;

- The presentation or not of the limits and deviations in the report;

- The tests to add to the report;

- The graphics to show;

- The header to use;

- The insertion or not of the logo of the company in the header of the report;

- The inclusion of the internal notes besides the notes for the client;

- The insertion or not of the digital signature of the user responsible for the report;

- In the page "Report Identification - Configuration", all the information relative to the identification of the report (address of the client/supplier, ambient conditions, line for the washing, brand and treatment, visibility of the grade and visual reference, and etc...)
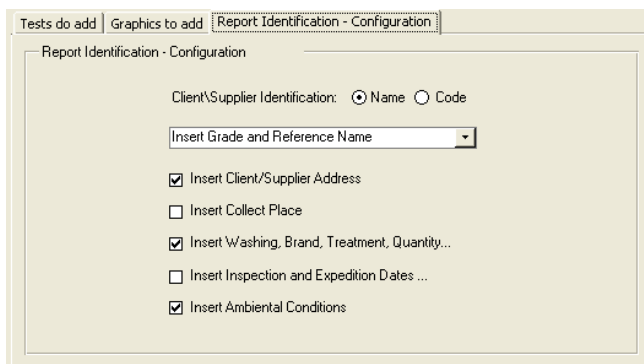
8.3.   Creation of Reports in .PDF format

For all the reports created by ControLab, the Software offers the possibility to export the report to a file in the ".PDF" format. This file can then be sent by email, for example.

For this, the user just has to use the button "Create PDF…" in the tool bar that appears during the preview of the reports.
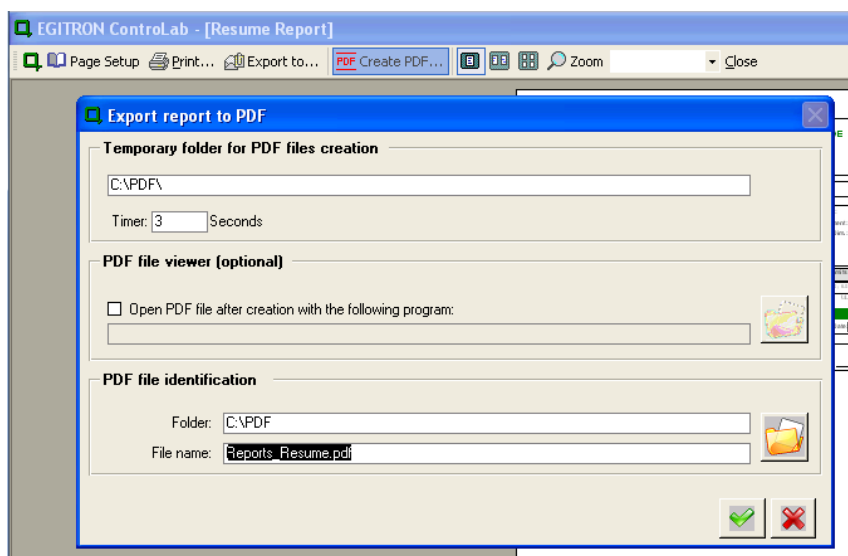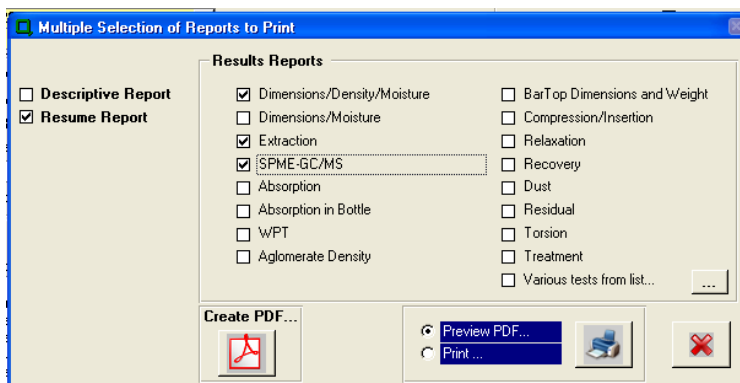

The user can then, before creating the ".PDF", configure the destination PATH, as well as personalize the name of the file to be created.

The user should notice, in the top pane of the window, the existence of a field for the definition of a temporarily folder for the files creation. This folder, (by default "C:\PDF\") must permit write and read operations to the Windows login from which the Software has been opened.

8.4.   Multiple Printing

In the window for the printing configuration for the reports, there is a button that permits to open a window from which it is possible to select various reports to be printed. The objective is the possibility to print a set of reports directly to the printer defined as being the printer by default or still the possibility to create an unique PDF file merging the different selected reports.

9.   SQL Server Database Maintenance

From the window of Database Maintenance, the user can access the following features for the management of the SQL Server database:

- Realize Backups;
- Test the Integrity of Data;
- Compact the Database;
- Restore the ControLab database, using a backup file previously created.

Some of there operations have risks associated with the possibility to corrupt the database. For this reason, they must be used carefully, and after the creation of a backup file!

10. EGITRON ControLab Modules

The next paragraphs of this document will succinctly describe each of the modules of EGITRON ControLab.

The user should read the specific manuals for the modules of EGITRON ControLab in order to get more detailed information about the features and the use of each of them.

10.1.   Module of Statistical Analysis

For each of the reports and tests of EGITRON ControLab, it is possible to define if it must or not be considered by the statistical analysis module for results and presented computations. This configuration must be done by the user from the activation field that has a histogram as icon.
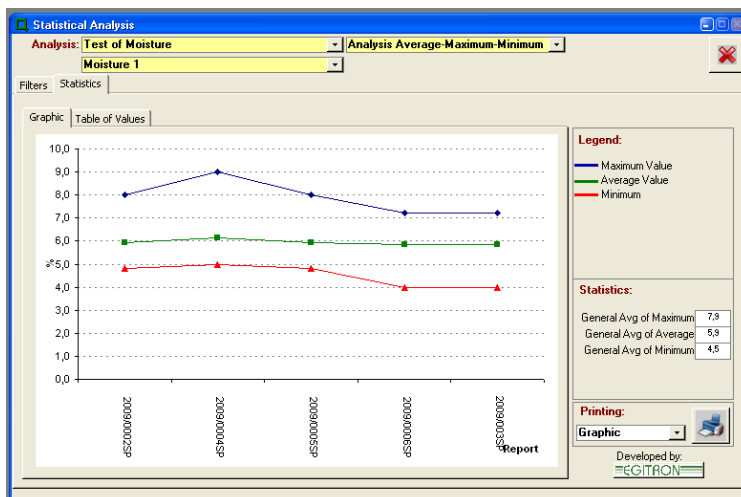

The module of Statistical Analysis permits the treatment and visualisation of the values saved in the database (quality reports) with filter options depending on different parameters, as the product, the size, the category, the entity, the visual grade or still the treatment (there is a list for each of these parameters from which the user may choose the elements than can be interesting for analysis). Besides these filter parameters, there are still other filters that must be considered in the analysis as the possibility to filter the reports establishing filters for the name of the reports or still between two dates or still defining the status of these reports.

In the first page of the tab of the window, it is possible to choose the filters for the information that must be considered in the analysis. In this page, the user must define the criteria for analysis (X axis, for the graphic).

In order to see the information relative to the selected filters, the user must select the page "Statistics". This way, the Software will permit to consult not only the graphic for the selected analysis (from the selection lists in the top of the window) but also the list of individual values.

For these two modes of visualization of information, it will be possible to print a specific report.

Note: The Statistical Analysis module just considers the finished tests. This way, it is not possible to analyse tests that are not completely finished, in order to guarantee a higher consistence for the analysis to be realized.

10.2. Historical Module

The objective of the creation of a Historical Database for ControLab is to save and administrate all the information relative to reports and configuration data that it is not pertinent to keep in the current database but that is important for answering to client's complaints or supplier's verifications or still for statistical analysis purposes.

The exportation of the information to the Historical Database permits to lighten the computational weight associated to the current Database, improving the performance from EGITRON ControLab.

The passage of the values is only in the way "Current Database" => "Historical Database".

The user should read the specific manual for this module in order to get more detailed information.

10.3. Integration with EGITRON SPC Pro

The main objective of the integration module of ControLab with EGITRON SPC Pro is to permit the importation of values that have been acquired and introduced in this system during the production process (and normally associated to Control Cards) into EGITRON ControLab, associating them to the final report of the product before its expedition (Quality Control Report).

This importation is peculiarly pertinent and useful for characteristics that are not changed since the control by the operator and the expedition, avoiding this way a new control that would result, in reality, in the information redundancy and consequent loss of time.

The module permits the importation of values for the following tests of ControLab: Dimensions, Moisture, Weight\Density and Torsion.

The user should read the specific manual for this module in order to get more detailed information.

10.4. Module of Tasks and Pending Tests

The module of "Tasks and Pending Tests" is a module totally integrated in ControLab and depends on the reports and created tests.

The main objective of this module is to control at any time (from the window of the module or from the respective reports that can be printed) the pending tasks associated to each of the responsible users in the laboratory.
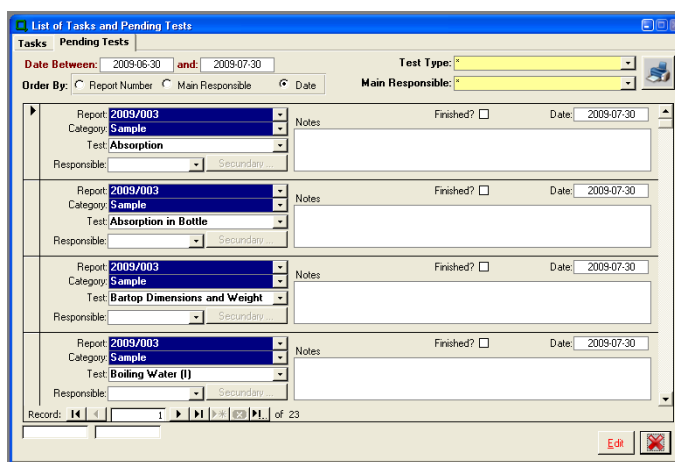
The attribution of tasks is realized by test. Each responsible user can be associated to one or various tests. Whenever a report is opened, the Software associates to each of the tests the respective responsible user. It is possible to manually correct the automatic association of responsible users to each test.

10.5.   Module of Calibrations

The module of calibrations permits the register of each of equipments existing in the laboratory of the company as well as the management of eventual calibrations, permitting the printing of different reports as the individual file of the equipment or still the annual plan of calibrations.
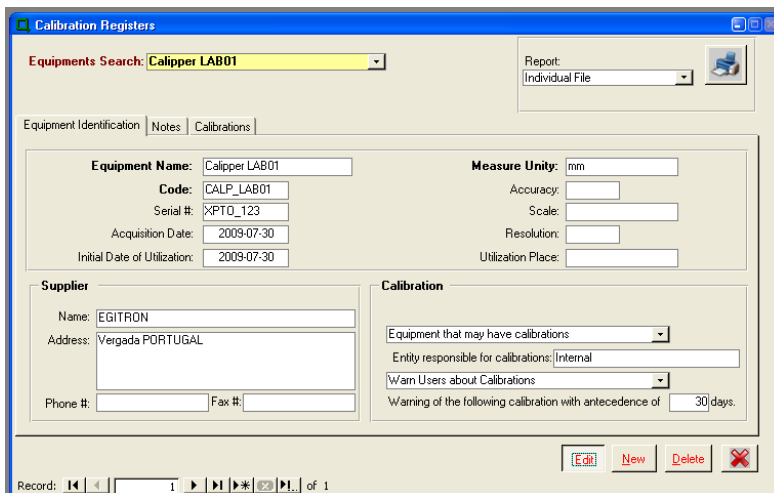
In order to correctly configure the registers of calibrations, there are two main steps:

- **Configure the Calibration warnings**

The user must define if the equipment may have calibrations and if warnings are required as well as the respective antecedence.
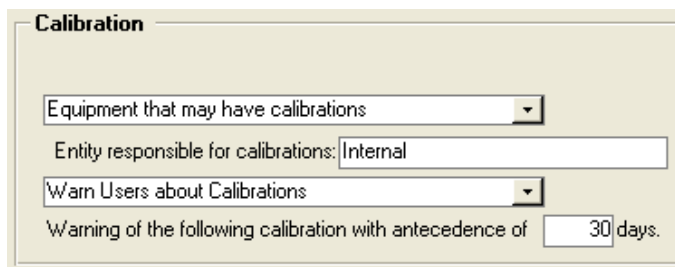
- **Define the dates of the planned and realized Calibrations**

The list available from the page "Calibrations" of the tab of the window of calibrations is a list of calibrations predicted and realized for the selected equipment.


If the field "Cal.?" is not selected, this means that the register is a predicted calibration and ControLab will use as base the field "Date" that will become the predicted date to provide warnings to the users.

From the moment that the field "Cal?" is filled, then the warning is not emitted any more because this means that the calibration has effectively been realized.

10.6.   Module of Technical Files

The module of Technical Files of EGITRON ControLab is a tool that permits the management and printing of the technical files for the different types of products and for each of the clients defined in the database of the Software. Easy to use and to configure, the module of Technical Specifications is completely integrated in EGITRON ControLab.
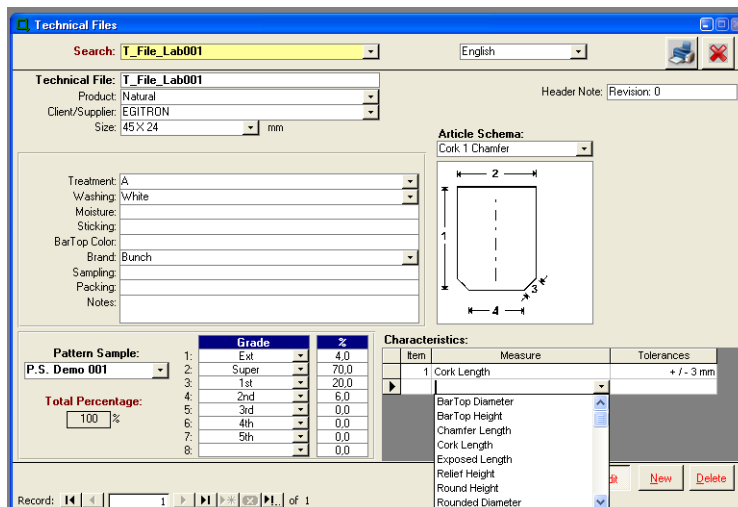

The module permits the insertion of pictures of products schemas and bartops as well as the register of their characteristics and technical specifications (tolerances) in the technical files printed from the ControLab.

10.7.   Module of Orders

The module of Orders permits to register and to manage orders, using the auxiliary configuration tables common to the quality reports. It also permits to search registers following different filters and to print reports of the order/items saved in the database.

Note that some characteristics of this module have as objective to turn its use more flexible and easier, as the possibility to create various
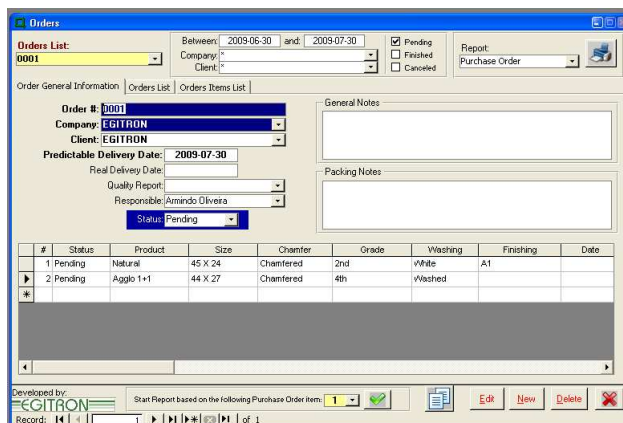
headers (definition of the logo and colours used in titles) for the printing of the main report of the order or still the feature of duplication of registers and etc.

NOTES

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