Largo innova

LargoMatch 2000

www.largoinnova.com

when colour counts

LargoMatch 2000 *Paint*

LargoMatch 2000 is a colour match prediction system with features for quality control, recipe calculation, batch correction, recipe management, analyze etc for laboratory and production. The software has a built in tool for preparation of colour calibration databases for production and tinting systems as well as feature for transfer of recipe to dosing system or LargoTint 2000 on tinting machine.
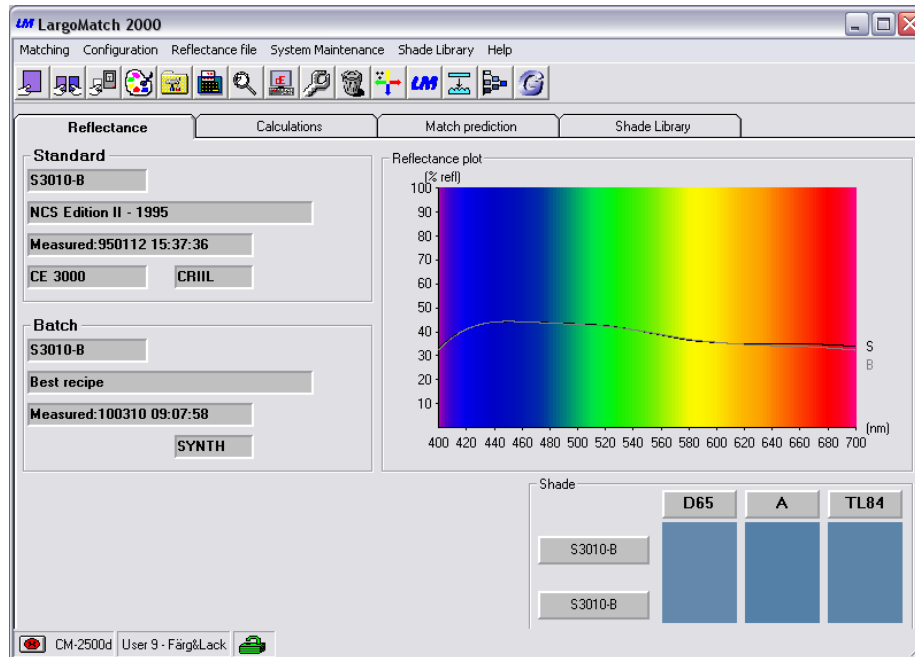
For easy navigation in the software the screen has 4 main sections:

Reflectance, shows the reflectance curves for Standard and Batch
Calculations, shows chosen calculation e.g. colour difference in CIELab
Match Predictions, formula/recipes calculated are shown
Shade Library, saved data on recipes or shades/standards are shown

Just click on each tab to view information and data.
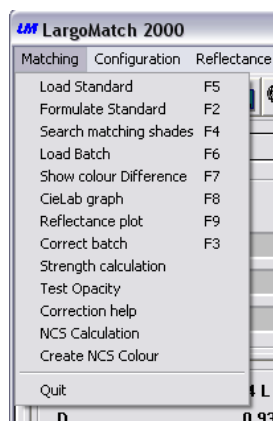
On top row you will find scroll down lists for Matching, Configuration, Reflectance file, System Maintenance, Shade Library and Help. In each list you have access to the functions by click on selected row or by the functions key e.g. F2 for matching.

The most frequently used functions you reach by the short-cuts or in the tool bar
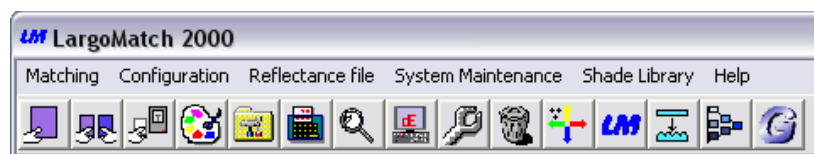
Match Prediction

Each tab in LargoMatch 2000 is designed for easy access of information.

For match prediction the standard used for recipe is shown with name, number, date of measurement, type of spectrophotometer, its settings and the shade.

The Match settings give you an overview of which and kind of database used, how many bases and colorants, Contrast Ratio etc within it. To improve the utilization of pigments and colorants it is possible to pre-select, lock, lock out and group them for availability when predicting recipes.

The recipe it self is present in the left part with the number/code, amount and name of the component. On the right hand you find the colour difference in selected colour difference equation and illuminant. The traffic lights symbolise a good or poor match. To the right the shade is visualised in each light source for standard and recipe.
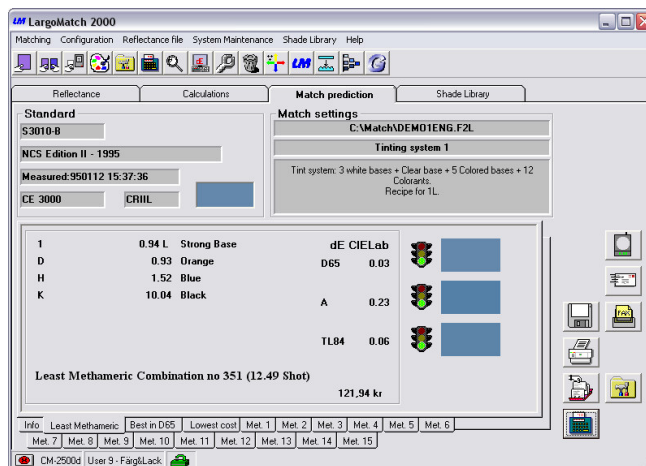
Result flaps
|	
Info	overview with number of combinations tested and the results
Least Methameric	the least metameric recipe
Best in XXX	best recipe in illuminant 1, default setting D65
Lowest cost	best recipe considering to cost
Met 1 ….15	the best following recipes depending on chosen setting "Recipe after match" in Match tolerances

Icons

When a match prediction is done, icons appear on right side of screen with icons for choices you have for the calculated recipe. Depending on settings in set up and database file you can create Lab-recipe in grams, transfer it to LargoTint 2000, send it via E-mail or as a fax. Save displayed recipe in selected shade library or Print a list or label. Test any of the combinations inside the set tolerance, Go to Set up for changing matching setting, Match loaded standard with selected database or Make a QuickMatch (useful when database has a large numbers of colorants e.g. >25, to find out if you can match the shade).
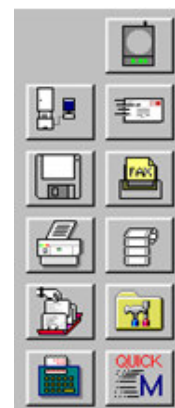
Batch correction

If a correction on predicted recipe is needed you may use Production Correction which calculates additions to an existing batch (common when deviations have been caused by the production method or temporary raw material deviations) or Laboratory Correction where a new recipe is calculated based on the outcome of the loaded batch.

It is possible to create own macros for different functions in the toolbar. Very useful default macros are the calculator which brings you step by step thru the match prediction (Load standard, Select database, Calculate recipe) and the adjustable wrench for correction (Load standard, Load batch, Correct).
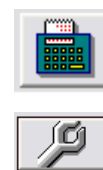
LargoMatch 2000 use different file format depending on what kind of information you want to save.

Reflectance File
A data file where measurement data can be stored, together with a number and a name to identify the sample, pigment concentrations (for database samples), sample contrast ratio (if measured) and sample gloss information (if measured). The current settings of the spectrophotometer being used, the spectrophotometer model, and the date and time for the measurement are saved as well.

Shade library
The shade library file can be created in two different formats, **.LRF** for measurement data only, tolerance on dE, tinting system recipes, production recipes, waste paint information, production batch statistics or **.LRT** with extended sample information e.g. individual tolerances on dL, da, db, dc and dh.

Database File
This file contains all information needed about your products base and colorants (format .F2L).

Database Types
In LargoMatch 2000 it's possible to prepare colour calibration databases for different purposes:

Standard database
Usually this version is used for Intermix (paint-in-paint) system or in production where the batch is made with dry pigment but final correction with colorant or paint (Paint-Paste-Pigment) alternatively when product use transparent base in combination with colorants were you want to control the addition manually.

Tinting System
For products were you use pre-filled cans of base paint and volumetric dispensed colorants. This version can calculate hiding in clear, coloured and the weakest white base.

Hiding Power
For products with transparent base were base addition shall be calculated on hiding and film thickness. This type can be used when product has transparent base and want it to be a part of the calculated recipe, then it's possible to change the base addition manually too.

More features in LargoMatch 2000:

Colour difference CIELab, CIELch, CIE94, ANLAB Lab, ANLAB Lch, HUNTERLAB Lab, HUNTERLAB Lch, CIE Luv, JPC 79, FMC2, DIN99, CMC (1:1), CMC (2:1) with individual setting of L:c

Index CIE Whiteness index, CIE Yellowness Index, CIE Tint

Illuminants D65, C, A, TL84, CWF, WWF, NFL, TL83, CR84

Observer 2° and 10° standard

Plot CIELab graph, reflectance curves, K/S, Log K/S

Strength calculation/adjustment to control colour strength, at XYZ or Absorption max and, if needed, calculate polymer or pigment additions for strength correction

Test opacity showing Contrast ratio (C.R.), calculated on the Y-value or, if the system is configured for measuring databases, the C.R. calculated at the wavelength with least hiding

Gloss Compensation feature for compensate the colour differences caused by gloss difference, demands a spectrophotometer with a movable gloss-trap

Texture correction feature for compensate when comparing a plain surface to a textured surface, calculate a recipe from a plain sample for a product with texture (ex plaster) or from a textured sample for a non-texture

**Search matching shades**, measured or entered values for XYZ, CIE Lab or CIE Lch

Keyboard input feature for entering new sample data (number, name and reflectance values) into a reflectance file

Synthesise sample creates shade from selected database by entering a recipe

FileMatching feature used to match an interval or all samples saved in a reflectance file according to selected database and matching conditions. The recipes will automatically be saved in dedicated shade library.

Analyze Tool for control of your shade libraries. You easily can show dE, plot in CIELab graph and print colour difference, plot trends against standards in bar graph etc.

Analysis LargoTint feature to extract information about Colour Cards, Colorants and Bases used in selected Recipe file created for LargoTint 2000. Results will be shown on screen and placed in Windows Clipboard for further handling.
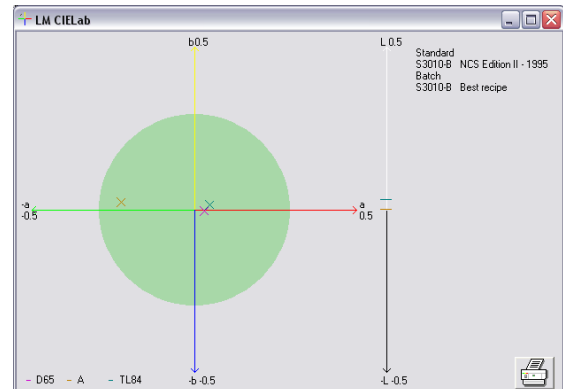
Options

Advanced File Matching
optional software for LargoMatch 2000 Paint with possibility to create or recalculate a
large number of recipes optimised according to the demands of the user:

- Recipes for standard colours saved in a reflectance
  file can be calculated and saved in
  a shade library.
- Recipes for colours previously predicted and saved
  in a shade library can be recalculated
  (i.e. after a colorant or product change).
- You can let the program search in a shade library
  with saved recipes for standard colours
  loaded from a reflectance and let the
- new colours share recipes if the colour difference
  between them is within
  specified tolerances.
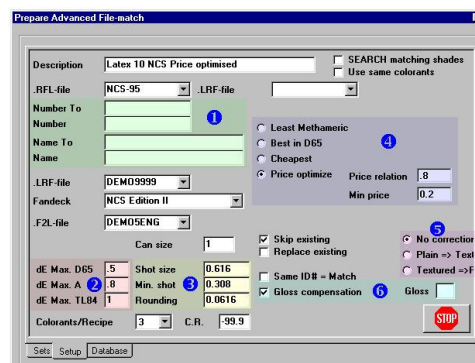
NCS calculation
for exact NCS code and closest NCS standard on loaded
standard (special licence, demands correlation of
spectrophotometer in use)

Create NCS colour calculates and create a recipe for any
NCS colour code (without a physical sample)