

# Featurematrix

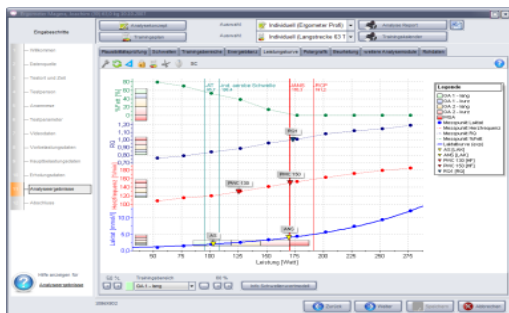
mesics software products lactate diagnostics



## Sport categories and parameters

- Analyzing lactate step tests
- Sport category Running (m/s and km/h)
- Sport category Cycling (Watt and km/h)
- Sport category Swimming (times in 10th of seconds)
- Sport category Rowing (Watt)
- Sport category Inline Skating (km/h)
- Sport category field test (constant distance)
- Sport category Walking Test (Inclination in %)
- individual sport categories can be created
- Input of lactate and heartrate values
- Input of ventilatoric parameters (O2, CO2 etc.)
- Input of blood pressure, RPE, METS etc.
- Input of detailed master (personal) data
- Input of detailed anamnesis data
- Stop watch and pacer system (multiple)
- Sport anthropometry (long time documentation)

+	+	+
+	+	+
+	+	+
+		
+	+	+
+	+	+
+		
+	+	+
+		
+	+	+
+		
+	RPE	RPE
+	+	+
+	+	+
+		
+		



## CHARTS

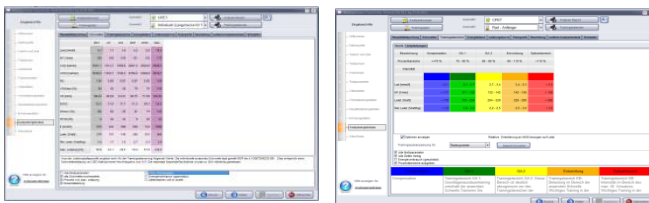
Charts fully configurable	+		
Chart export to EMF/BMP/JPG (and poster format)	+		
Chart with time axis		+	+
Chart with load (speed/power) axis	+	+	+
Chart with continous HR data	+	+	+
CPET Wasserman plots	+		
POLAR, multiaxis chart	+		
Chart includes pace options to be displayed	+		

## THRESHOLD MODELS

*basic*      *pro*

Threshold models after Mader (4 mmol/l) and Dickhuth (+1,5 mmol/l model)  
 calculates all well know threshold models incl. Stegmann and LT1 (aerobic threshold)  
 Receiving test analysis  
 Multiple cross comparison of threshold models (multi threshold analysis)  
 Showing ventilatory thresholds (VT1, VT2)  
 All models can be configured  
 Averaging of all used thresholds

configurable	+	+
+		
+		
+		
+		
+		



## ANALYSIS

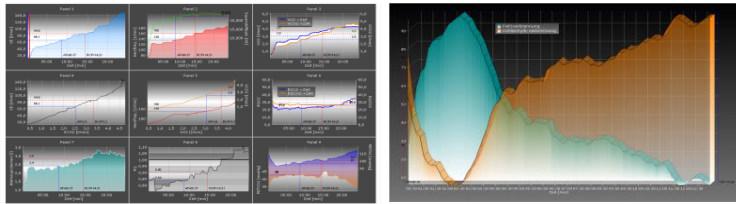
Error correction (weighted fitting)  
 Accepts rest and recovery values  
 Exponential curve fitting  
 Polynominal curve fitting  
 B-Spline curve fitting

Exponential and polynominal curvefitting as comparison  
 Thresholds and training zones can be adapted to the anamnesis  
 Calculation of fixed thresholds (2 mmol/l, PWC...)  
 Analyzing of recovery capability  
 Analysing of anaerobic capability

Correlation of measurement values (Lactate vs. HR etc)  
 Target time estimation for different distances  
 Assessment of max. power and submax. Power  
 VO2 (max) estimation

Calculation of energy usage at different thresholds (CPET)  
 Estimation of energy usage at different thresholds  
 Energy balancing, weight development prognosis  
 Load protocols can be predefined  
 Output of regressional analysis data  
 HR adaption for different sport categories  
 Plausibility check analysis  
 Documentation using auto text fields  
 Analysis concepts for quick adaption

+		
+	+	+
+		
+		
	+	+
+		
+	+	+
+	2	2
+		
+		
+		
+	+	+
+		
+	+	+
+		
+		
+		
+		



## CARDIOPULMONARY EXERCISE TEST ANALYSIS

Multi Channel Aggregator (importing data from different source systems)

Channel overlay (mixing data from different sources)

Channel editor (filter, value editor etc.)

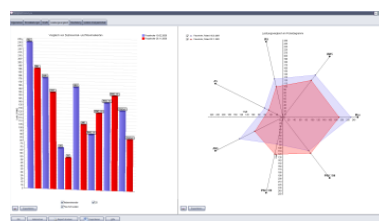
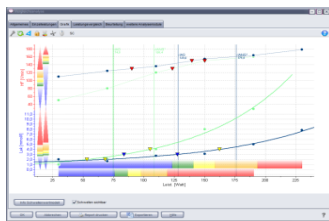
Multi panel display (Wasserman panels etc)

Multi panel reports and report editor

Panel designer

Panel views (clustering panels to views)

+		
+		
+		
+		
+		
+		
+		



## TEST COMPARISON

Test comparison

Automatic ordering of tests by different categories (load at threshold etc.)

Creating of sub groups possible

Grouping of tests

Performance comparison (table)

Performance comparison (diagram)

Threshold comparison (polar diagram)

Threshold diagram (gantt diagram)

Comparison of PWC values

Comparing of training zones

Comparing of ventilatory values

Exporting comparison results to word document

+	+	+
+		
+		
+		
+	+	+
+	+	+
+		
+		
+		
+		
+		



## TRAINING PLANS

Showing training zones

Training zones can be aligned to power at a threshold

Training zones can be aligned to lactate at a threshold

Training zones can be aligned to HR at a threshold

Training zones can be aligned to other values (eg. RQ)

Training zones can be aligned to maximum values (Hrmax)

Training zones can be aligned to aerobic threshold (LT1) or VT1

Training zones can be adjusted (color, name, description ...)

Real energy consumption per zone (from CPET)

Estimated energy consumption per zone

Carvonen formula included

Number of workouts per day

Training schedule basing on cycles

Training schedule basing on single days

Training schedule calendar generator

Training schedule templates

Training schedule can be individualized

+	+	+
+	+	+
+	+	+
+	+	+
+		
+	+	+
+	+	+
+	+	+
+		
+	+	+
+		
+		1
+		
+		+
+		+
+		+
+		+



## REPORTING

Report Export as PDF

Report Export as WORD document

Report designer (end user)

Training calendar and designer

CPET Report and Report designer

Logo integration

+	+	+
+		
+	+	+
+		+
+		
+	+	+

Direct Email export (sending of PDF files)

+		
---	--	--

## INTERFACES

HW-interface for "Lactate Scout" (BLUETOOTH)  
 HW-interface to devices from EKF Diagnostics VIA LAN/WLAN/SERIELL  
 HW-interface to Dr. Lange LP 20 VIA LAN/WLAN/SERIELL  
 HW-interface to Diaglobal Photometer VIA LAN/WLAN/SERIELL  
 HW-interface to Cyclus 2 (RBM Elektronik)  
 HW-interface to POLAR heartrate monitors (USB/IrDA/Serial)  
 HW-interface for USB video cameras (Video and single frame)  
 SW-interface to POLAR (HRM files)  
 SW-interface to h/p/cosmos para control V5  
 GDT 2.1  
 Import of ventilatory data from Schiller, Ganshorn, Cortex, COSMED, ZAN, Geratherm...  
 Import of Excel files and text files  
 Export to Excel  
 Export of master data to text files  
 Import of master data from text files

+	+	+
+		
+		
+		
+		
+		
+	+	+
+		
+		
+		
+	+	+
+		



## SYSTEM

SQL-database with searching features  
 multi user database  
 server enabled database  
 portable product using USB stick  
 Operating system Windows WIN 7/WIN8 / WIN10  
 APPLE OS (using Parallels / Boot Camp)  
 Free support at installation



+		
+	+	+
+	+	+
+	+	+
+	+	+
+	+	+

[www.mesics.de](http://www.mesics.de)