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LABS/Q® - Use in Contract Labs

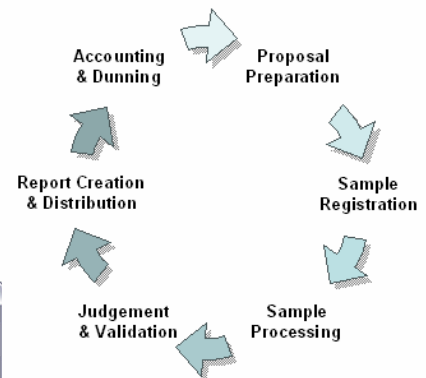
The requirements of contract labs are characterised by a workflow starting with preparing a proposal and ending with invoicing and potential tracking of incoming payments. This demands a functionality for optimized and efficient handling of this special workflow. The work amount for administrative tasks besides the analytical work must be kept minimal to gain high cost efficiency.

The illustrated workflow describes the applications of LABS/Q® in contract labs.

Proposal Preparation

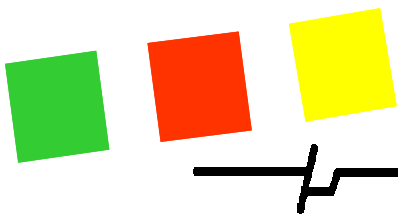
It is mandatory for a contract lab to offer services based on standardized and customer-specific price lists.

LABS/Q® supports this requirements with it's highly flexible price list module. Individual offered services (e.g. pH-measuring, travelling costs) or complete work packages (e.g. analysis according to national drinking water ordinance - US-EPA etc.) can be offered by unit price or scaled price.



The screenshot shows the 'Preisliste' (Price List) configuration window in the LABS/Q software. The window title is '5875 - Modul 183-0'. It features a tree view on the left with categories like 'DRYHEATBC', 'DAMPHEATDB2', etc. The main area shows details for a price list item 'TVOAN3' (Anlage 3 zu § 7 Indikatorparameter) with a unit price of 155.00. Below this, a table displays various price list items with their respective prices and types.

	Einzelpreis	Pos.	Posten-Typ
	23.00		Dienstleistungs
	65.00		Dienstleistungs
	0.56		Sonderposten
	0.10		Sonderposten
	20.00		Sonderposten
	0.65		Sonderposten
	155.00		Merkmalgruppe
- Teil II: Chemische Parameter, deren	175.00		Merkmalgruppe
Anlage 2 zu § 9 Abs. 2 Chemische Parameter - Teil I: Chemische Parameter, deren	275.00		Merkmalgruppe
Anlage 1 zu § 5 Abs. 2 und 3 Mikrobiologische Parameter - Teil II: Anforderungen a	55.00		Merkmalgruppe
Anlage 1 zu § 5 Abs. 2 und 3 Mikrobiologische Parameter - Teil I: Allgemeine Anfo	29.00		Merkmalgruppe
Triazine / Phenylhamstoffherbizide	96.00		Merkmalgruppe
Summennparameter	62.00		Merkmalgruppe



The partner management module holds all customer information as applicable price list, agreed discounts and scaled prices or methods of payment.

For selected customers this information can also hold online-access accounts (Internet) for announcing or issuing orders. It is also possible to easily generate proposals for studies and projects based on already planned submissions. These proposals can be send via email or fax.

The screenshot displays the '5875 - MODUL 220 Prüfauftrags-Registrierung' window. It features a main table for 'Auftrags-Posten' and several detail panels.

Posten-Art	Posten	Kurzbezeichnung	Anzahl	Gesamt
Prüfanweisung	TRUEBUNGFNU	TRUEBUNGFNU	1	25.00
Prüfanweisung	TOC	TOC	1	25.00
Prüfanweisung	SULFAT	SULFAT	1	25.00
Prüfanweisung	PH-WERT	PH-WERT	1	25.00
Prüfanweisung	OXIDIERBARKEIT	OXIDIERBARKEIT	1	25.00
Prüfanweisung	NATRIUM	Natrium	1	25.00
Prüfanweisung	MNWASSER	MNWASSER	1	32.00
Prüfanweisung	LF	LF	1	25.00
Prüfanweisung	KOLONIE2236TVO	KOLONIE2236TVO	1	25.00
Prüfanweisung	GESCHMACK	GESCHMACK	1	25.00
Prüfanweisung	GERUCHSSW	GERUCHSSW	1	25.00
Prüfanweisung	FÄRBUNG436	FÄRBUNG436	1	25.00
Prüfanweisung	FEWASSER	FEWASSER	1	25.00
Prüfanweisung	CLOSTRIDIUM	CLOSTRIDIUM	1	25.00
Prüfanweisung	CHLORID	CHLORID	1	25.00
Prüfanweisung	AMMONIUM	AMMONIUM	1	22.00
Prüfanweisung	ALWASSER	ALWASSER	1	25.00

Other panels include 'Prüfauftrag' (Order details), 'Auftrags-Posten' (Order items), 'Prüfauftrags-Posten' (Order item details), and 'Prüfauftrags-Proben' (Sample details).

Sample Registration

Samples can be delivered scheduled, based on an already commissioned order, a study or a project, or unscheduled. On sample registration all samples must be recorded and individually labelled. LABS/Q® does this by means of its sample management module that registers all samples uniquely and assigns a stock room. This unique sample ID can also be used as a bar code. Further identifiers (e.g. RFIDs) can also be assigned. This is especially useful when supplying sample containers with predefined RFID-labels to potential customers.

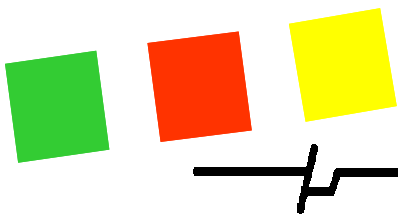
Sample Processing

Samples can be assigned to one or more submissions during registration. This is important in case the client orders further analysis after completion of the first submission.

LABS/Q® offers supporting functionality for being on schedule.

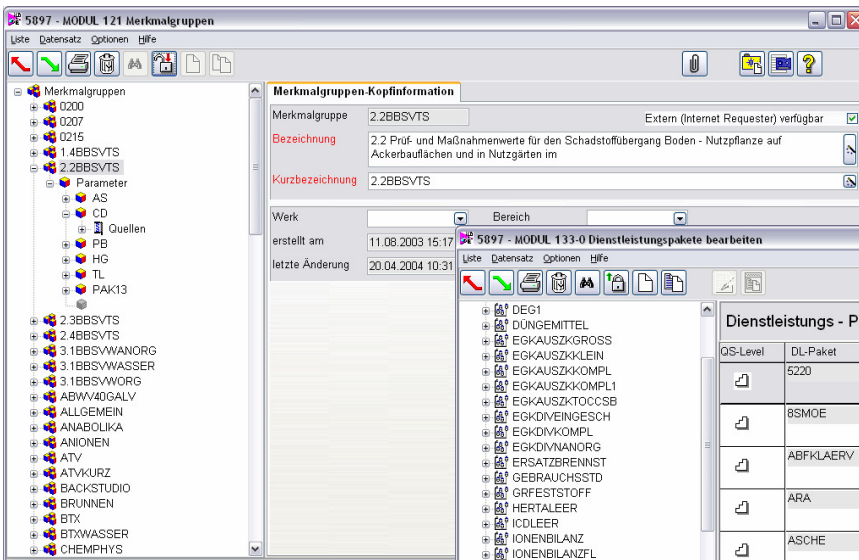
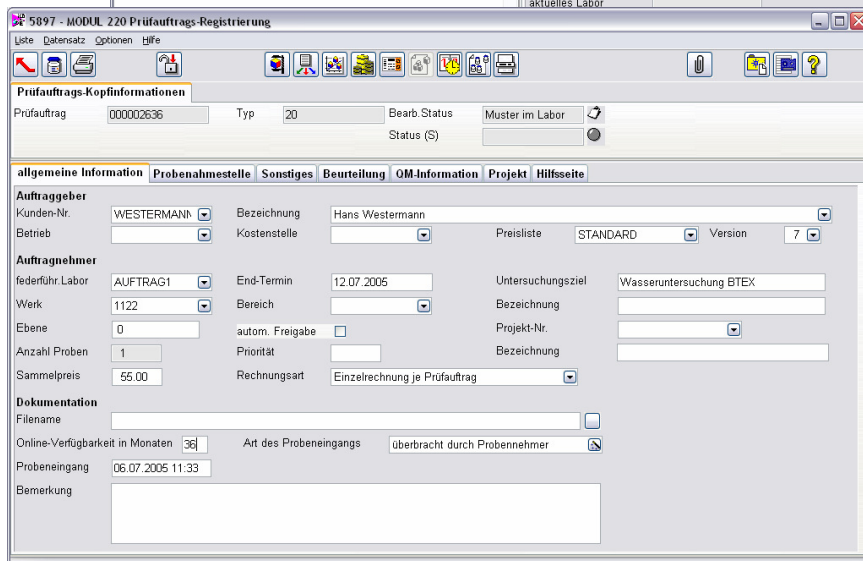
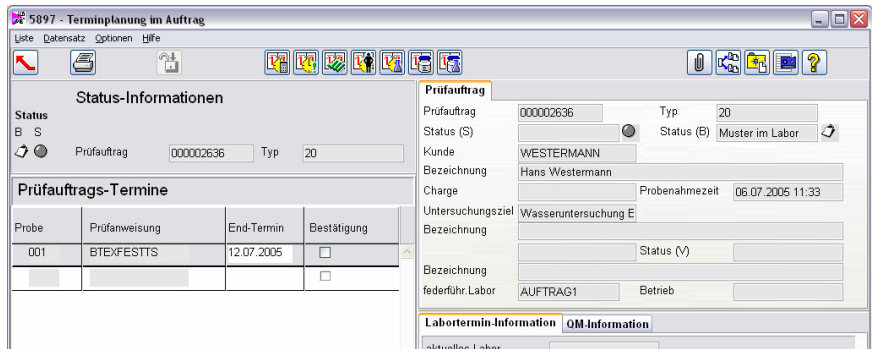
With activation of the submission the system calculates or sets an estimated finishing time for the complete submission, the individual samples or methods.

The calculation of the time estimates is based on the details of the methods (master data) and the effective capacity utilisation of the laboratory.



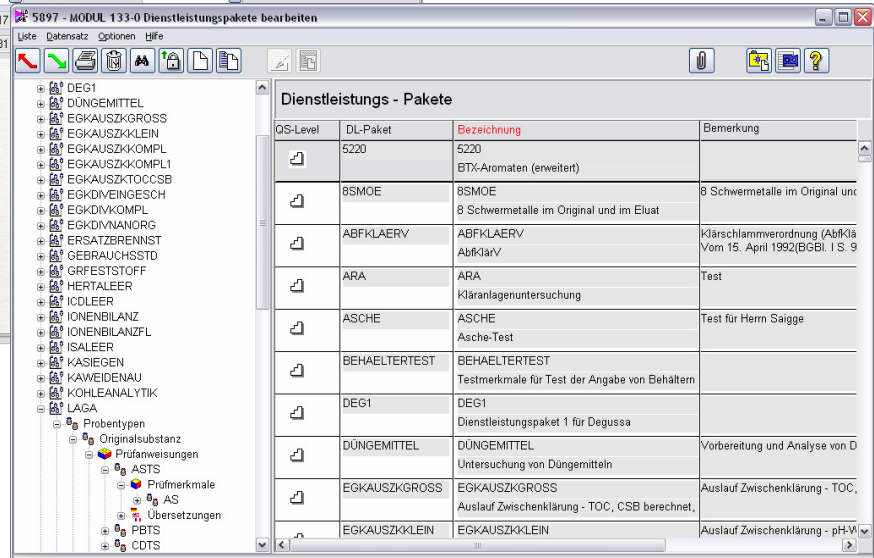
These time estimates can be either confirmed manually or adjusted when necessary. The customer can be automatically notified when to expect the final results or findings. Furthermore a deadline-monitoring and priority control of submission handling is possible.

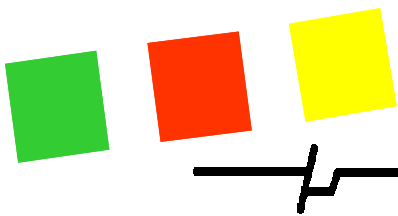
Submissions can hold 1-n samples and are processed according to the customer agreed scope of inspection. The definition of the scope of inspection is supported by the following functions:



- Automatic method assignment to the ordered property (e.g. the system will automatically suggest a matching method for a heavy-metal ppm-analysis).

- Insertion of property groups with or without specification limits for submissions.





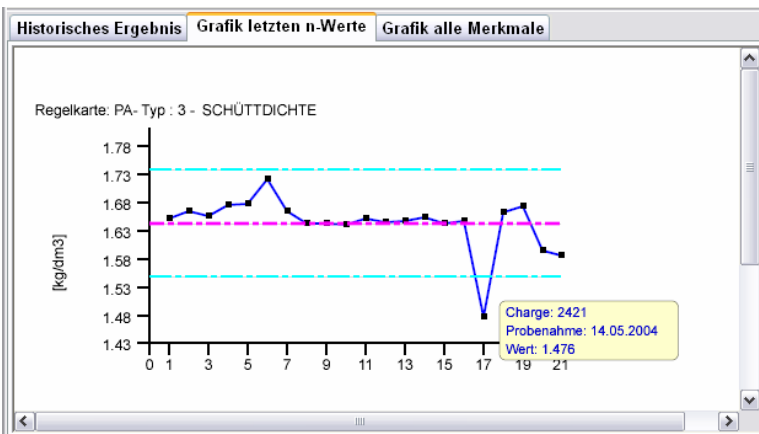
- Insertion of service packages (complete sets for inspection scopes that can contain several samples as original sample and associated eluate).
- Freely definable validation rules (reasonable workflow order for the individual steps)

The various possibilities for data logging in **LABS/Q**® for complete submissions, individual samples, methods, instruments or work lists (sample sequences) can be manually processed or automatically transferred via instrument links.

Judgement and Validation

All results can be validated directly during input according to the following specifications and rules:

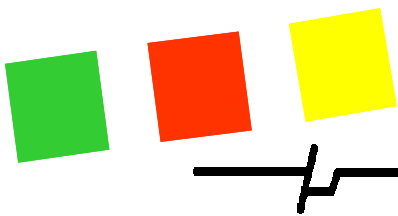
- Automatic indication of results in case of violated methodical limits as measurement range, limit of detection and quantification.
- Validation against sample-specific limits.



Status-Informationen					
Status					
B	S	M	Prüfauftrag	000002863 Typ 3	
			Probe Nr.	001	
			PAW	ASBBSVTS	
			PAW-DF-Nr.	1	
			Messung	1	
Prüfmerkmale					
B	S	M	Bezeichnung	Ergebnis	Einheit
			Einwaage feuchte Probe + Gefäß	67.7650	g
			Auswaage trockene Probe + Gef.	43.79	g
			Trockenrückstand	54.38	%
			Arsen	11	mg/kg TS
			Blei	23	mg/kg TS
			Cadmium	< 0.5	mg/kg TS
			Chrom, gesamt	8.5	mg/kg TS
			Kupfer	15.3	mg/kg TS
			Nickel	8.3	mg/kg TS

Historische Endergebnisse		
Charge	Ergebnis	Einheit
2421	1.476	kg/dm3
03.07.2003 06:00	1.648	kg/dm3
02.07.2003 06:00	1.643	kg/dm3
01.07.2003 06:00	1.655	kg/dm3
30.06.2003 06:00	1.647	kg/dm3
30.06.2003 06:00	1.645	kg/dm3
27.06.2003 06:00	1.651	kg/dm3
26.06.2003 06:00	1.642	kg/dm3
25.06.2003 06:00	1.644	kg/dm3
24.06.2003 06:00	1.643	kg/dm3

- Automatic comparison of measured values against external list of limits (e.g. comparison of waste or soil samples against US-EPA-limits, local disposal limits or similar regulations) with simultaneous limit-lifts and automatic judgement of materials.
- For repeated checks on sample points a test for trend violations is performed. Historical measurements can be displayed as tables or graphics in possible combination with other properties.



Report Creation and Distribution

Depending on the configuration of **LABS/Q®** and its reports the inspection results are supplied to the customer. After processing has been finalized, the result reports are generated based on the intended templates and automatically distributed.

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Wöhler Straße 15
D 51662 Gummersbach

Frechen, 25.08.2006

Prüfbericht - 000002913

Untersuchungs-Nr.: 000002913 Tag der Entlieferung: 15.05.2006 Beginn der Untersuchung: 15.05.2006 13:10
Prüfgegenstand: Ende der Untersuchung: 15.05.2006 13:10

Herkunft / Probe 001 Abwasserprobe 8

Merkmal	Ergebnis	Dimension	Norm	Messunsicher- heit (± %)	
Biochemischer Sauerstoffbedarf (BSB5)	<	5	mg/l	DIN 38409-H51	10
Chemischer Sauerstoffbedarf (CSB)	<	15	mg/l	DIN 38409-H41	10
Phosphor gesamt	1.23	mg/l	DIN EN 1189: 12.06	10	
pH-Wert	6.75		DIN 38404-C 5 (1984-1)	10	
Spezifische elektrische Leitfähigkeit	453	µS/cm	DIN EN 27885-C 8 (1995-09)	10	
Ammonium	0.15	mg/l	DIN 38405-E5	10	
Absorbierbare Organisch Kohlenverb.	1.4	mg/l	EN 1485:1996	10	
Gesamtstickstoff (N)	0.45	mg/l	Abwasserverordnung	10	
Kohlenwasserstoffe	0.4	mg/l	DIN 38409-H18	10	

Beurteilung:
Die untersuchte Abwasserprobe entspricht hinsichtlich des Gehaltes an AOX nicht den wasserrechtlichen Anforderungen.

Seite 1 von 2

Geschäftsführer: Wolfgang Rosner, Bernd Winkler, HRB 42497, Amtsgericht Köln
Bankverbindungen: Stadtpostkass. Köln (BLZ 370 50) Kto.-Nr. 8 232 399; Dresdner Bank Köln (370 000 43) Kto.-Ab. 4 258 812 00

All information can also be provided in electronic form (e.g. as XML-file) for further processing on the customer's side.

```
1 <?xml version="1.0" encoding="ISO-8859-1" ?>
2 <!DOCTYPE data SYSTEM 'chargengebilde_ge.dtd'>
3 <Data>
4 <DataSet>
5 <table>CHARGE</table>
6 <Action>UPDATE</Action>
7 <TransID>0</TransID>
8 <Key>
9 <ArtNum>PURA FARINEX P01 </ArtNum>
10 <Charge>234456 </Charge>
11 <GebindeNum>0</GebindeNum>
12 </Key>
13 <Info>
14 <QMerkmal>undefiniert </QMerkmal>
15 <Verfallsdatum>20040715</Verfallsdatum>
16 <Kommentar>testweise freigegeben
17 <Freigabedatum>20040617</Freigabedatum>
18 </Info>
19 </DataSet>
20 </Data>
21
```

Accounting and Dunning

It is highly important for contract labs to issue invoices in a timely fashion and to monitor all incoming payments. This is supported by **LABS/Q®** by:

- A comprehensive accounting module for creation of single or collective invoices
- A module for monitoring of incoming payments incl. booking of payments
- A module for dunning with automatic creation of reminders
- A price list management with arbitrary customer specific price lists for easy proposal preparation and automatic charging of services with costs per sample and for the whole submission.