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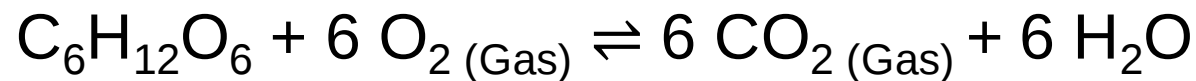
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OxiTop® IDS BOD and more

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SALES GMBH & CO KG

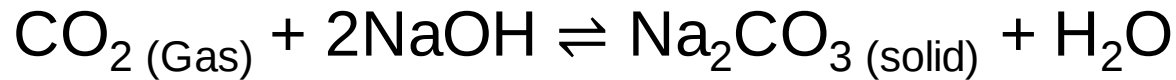
Respirometry – Basic principle of degradation of organic carbons

Micro organisms need oxygen for their metabolism.
When digesting carbons they produce carbon dioxide



Principle of respirometry

The absorption of carbon dioxide in a closed vessel leads to a pressure decrease.



Since 1997 – a unique product

OxiTop® Control

- BOD and degradation tests



OxiTop® Control

IR Interface



OC 100: **“BOD-Routine”**: Single bottles, GLP, AutoTemp Function

“BOD-Standard”: administration of maximum 12 parallel samples with GLP-statistics/averaging, AutoTemp Function selectable

OC 110: **“BOD-Routine”** / **“BOD-Standard”** as OC 100

“BSB-Special”: Administration of parallel samples

Parameter V_{tot} , V_{pr} , p_{at} , T freely selectable

“Pressure-p”: Pressure measurement 500 - 1350 hPa

But now:

OxiTop[®] goes IDS: OxiTop[®]-IDS – more than BOD



OxiTop[®]-IDS



OxiTop[®]-IDS/B

A new feature: OxiTop®- IDS: Not only with the Multi...

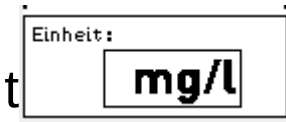
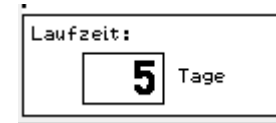
- Easy to identify: Use the manual ID-No.



- Simply select:

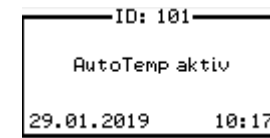


- Time span 1 – 7 days
- Unit of the result: mg/l, hPa, Δ hPa, digit
- Sample volume (ml): 22.5 43.5 97 164 250 365 432



- Start the measurement:

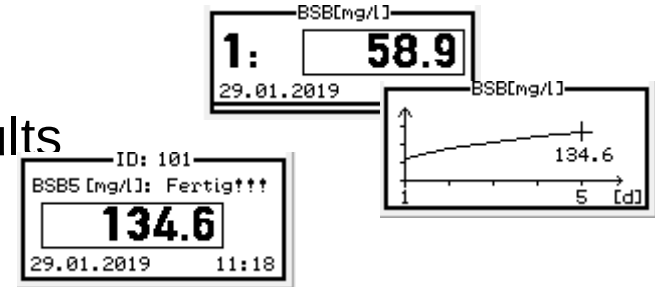
- AutoTemp is running



A new feature: OxiTop®- IDS: Not only with the Multi...

- Checking the measurement:

- Call-up intermediate results
- Read out of curves
- Receiving final results
- Terminate the measurement



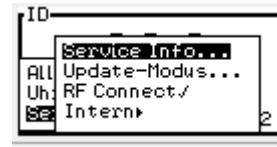
- More convenient settings

- Languages (D,E, F, Sp)
- Illumination
- Control-LED (Blue: Measuring, Green: Done, Red: Attention)
- Display shut off
- ID assignement

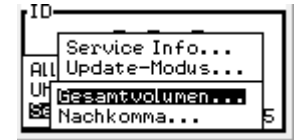


A new feature: OxiTop®- IDS: Not only with the Multi...

- Setting date/time:
- **Additional points: Upadte for wireless heads only!**



- Menu „Internal“: Bottle Volume (Attention!)
- Special function: OxiTop® PT test program



And more...

Enhanced Firmware (update) Multi 3620 or 3630 IDS

- Integration of old controller functions with new user interface
- Adjustment to menu structure of 36x0
- Switching between Echem applications and OxiTop®
- Comprehensive functions – no differentiation: BOD standard, BOD Special, Pressure
- Data acquisition via Achat OC (without USB adapter!)
- Future prospects: Templates for specific tests (OECD, AT4, will be planned, but will need a lot of definition and programming work

BOD and aerobic degradation

All kinds of aerobic degradation (BOB/OECD...):



Measurement BOD/aerobic tests, OECD (duration up to 180 d)

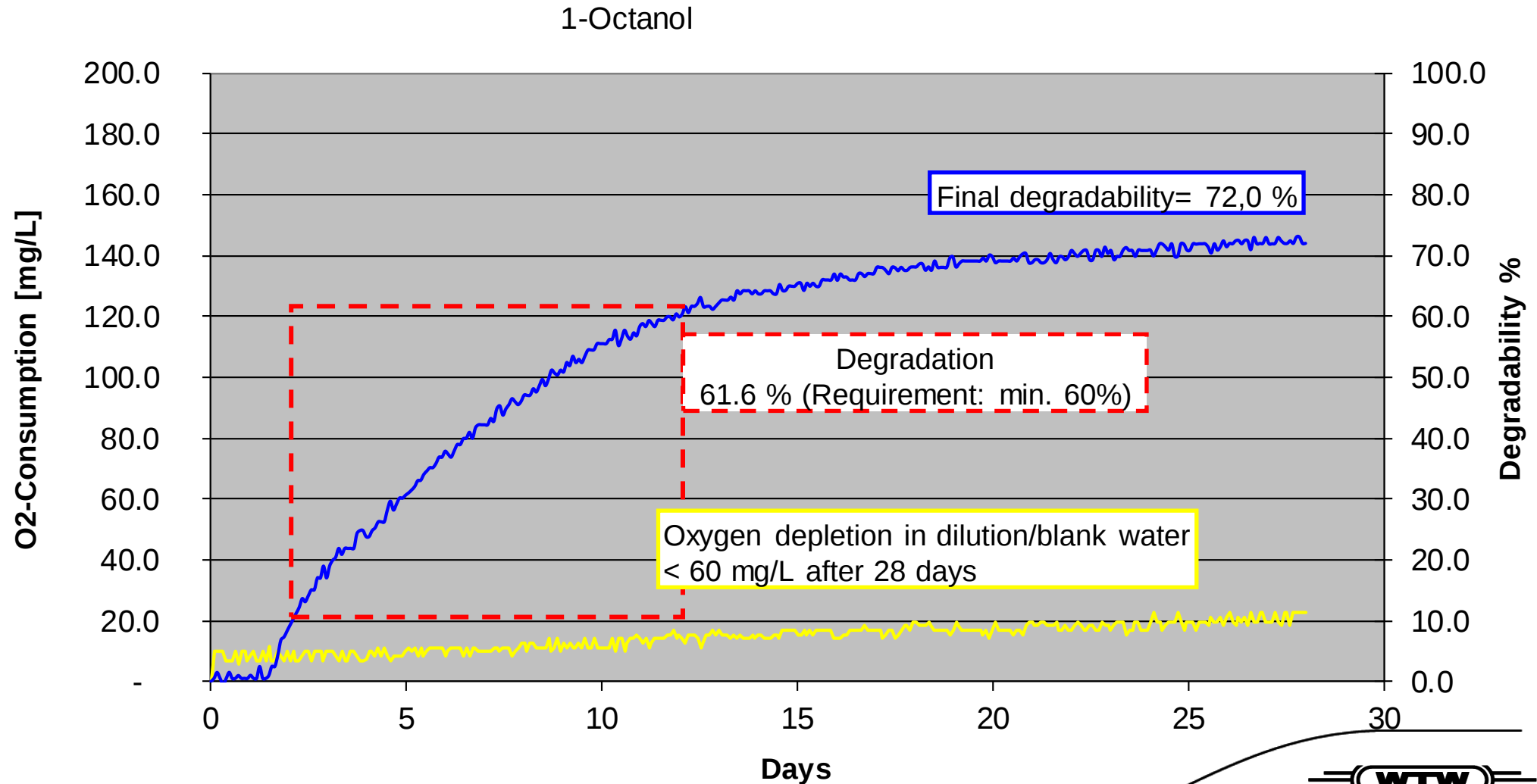
- OxiTop[®]-IDS IS 6/IS 12



Measurement (OECD)

- OxiTop[®]-IDS A 6 (strong degradability)
- OxiTop[®]-IDS A 12 (low degradability)

Application example: OECD 301F



Soil respiration

Soil respiration (soil with low activities up to AT4 (bio-mechanically treated waste):



Low activity
(bottle volume
500 ml)
OxiTop®-IDS B6

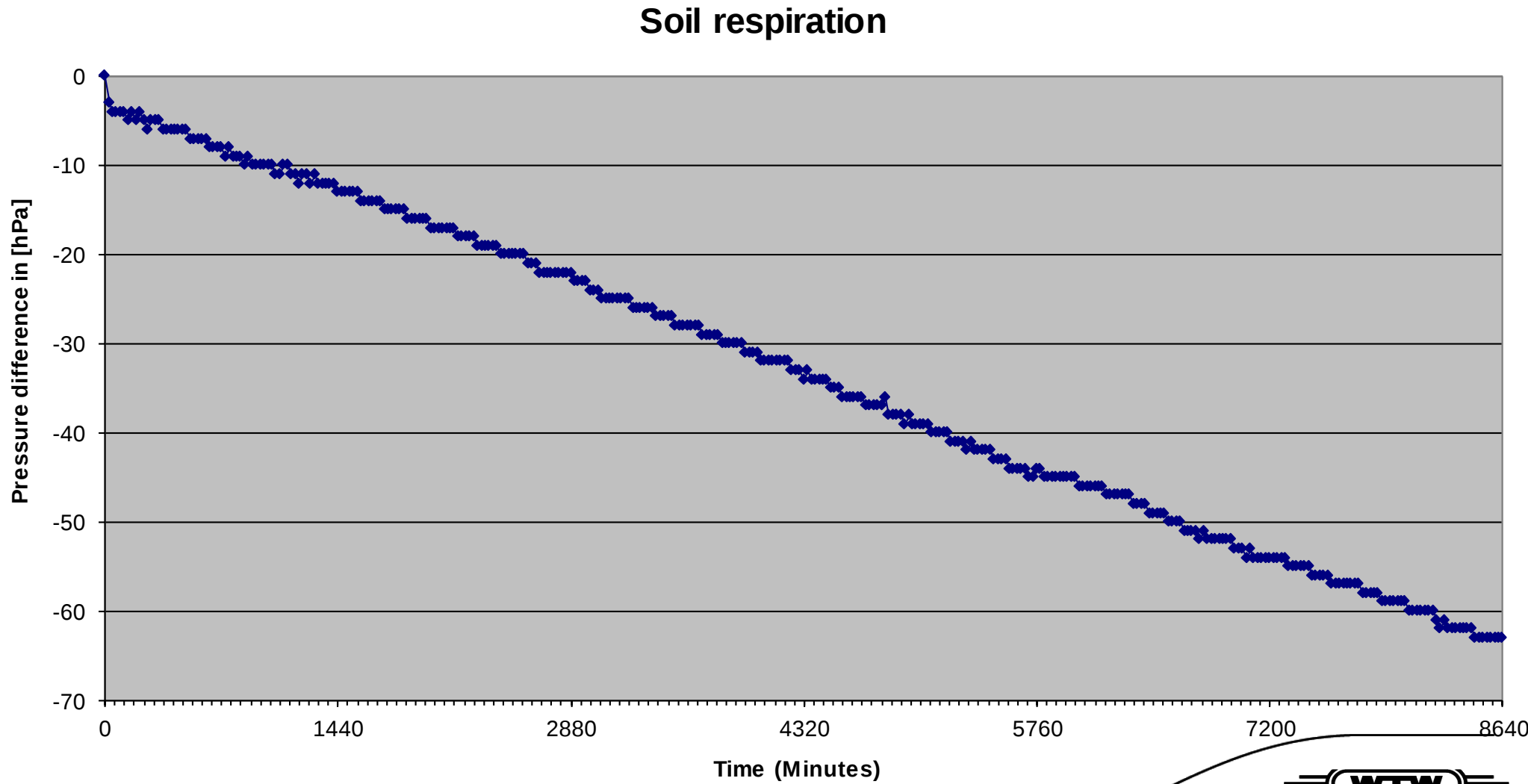


Soils with medium to
high activity
OxiTop®-IDS B6M



Bio mechanically
treated waste (AT4)
OxiTop®-IDS B6M 2.5

Soil respiration



Anaerobic Measurements and Biogas

OxiTop®-IDS/B

- Corrosion proof pressure sensors
- Pressure range up to **1500 hPa**
- Part of following sets: OxiTop®-IDS AN 6/AN 12
- **More Safety**: Active over pressure warning (Display/red blinking LED!)



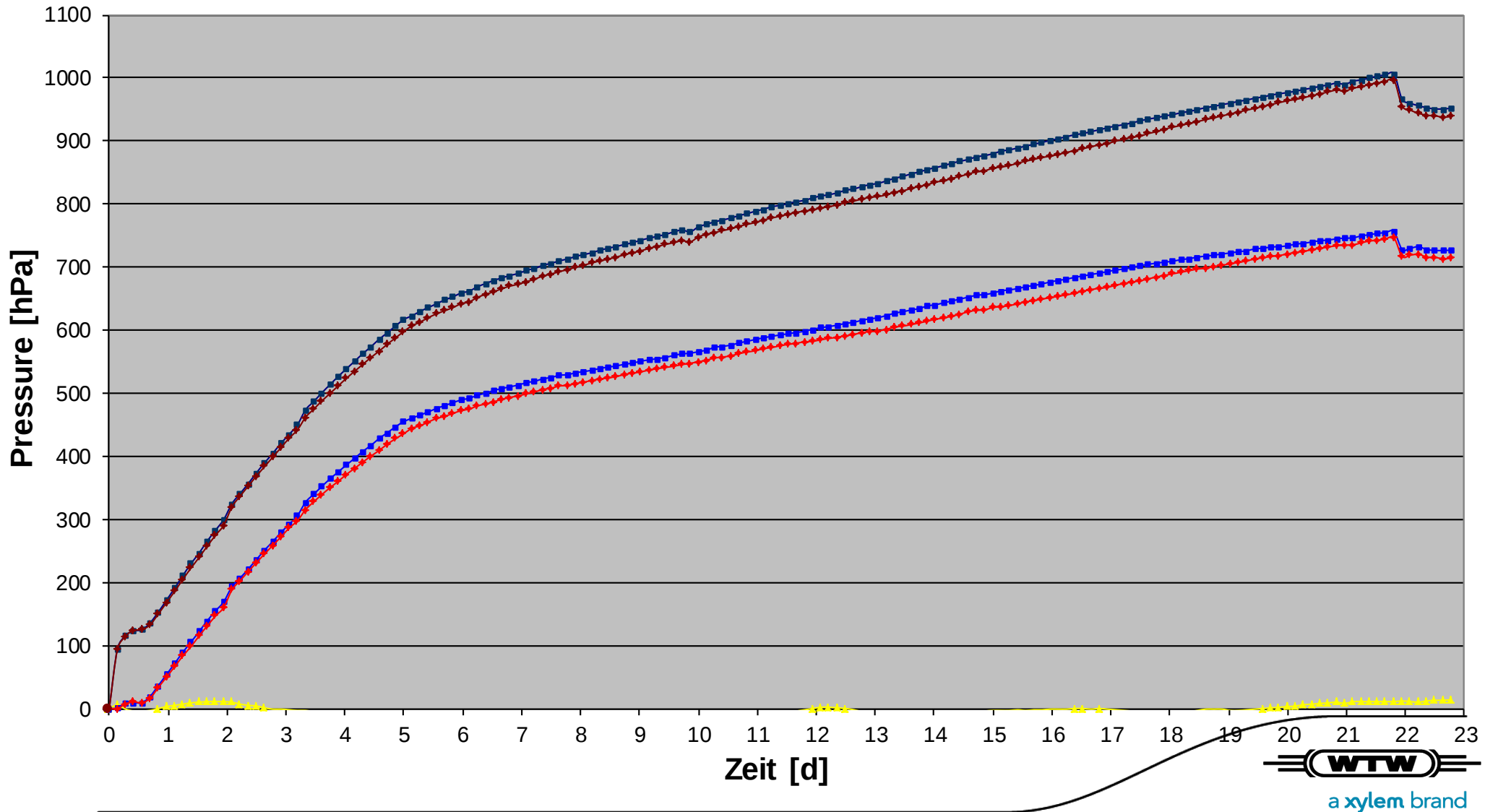
Anaerobic Measurements and BiogasC

Example of biogas compositions:

Methan	40 - 75 %
Carbon dioxide	25 - 55 %
Water vapor	0 - 10 %
Nitrogen	0 - 5 %
Oxygen	0 - 2 %
Hydrogen	0 - 1 %
Ammonia	0 - 1 %
Hydrogen peroxide	0 - 1 %
Hydrogen sulfide	0 - 1 %

Anaerobic Measurements and Biogas

Cow manure



Everything else stays as it is????



Almost:

All OxiTop[®]-C accessories, consumables and replacement parts will remain for sale: Bottles, vessels, absorbants, stirring platforms (IS 6, IS 12, IS 6-Var now in cosmic grey), thermostatic cabinets, etc.

The following heads will be supplied as replacement:

OxiTop[®]-C, OxiTop[®]-C 2, OxiTop[®]-C/B

But: All sets are without controllers!

Some technical specs....

OxiTop®-IDS/OxiTop®-IDS/B	
Pressure range (hPa)	500 to 1250 resp. 500 to 1500
BOD measurement range (mg/l)	0 to 4000 mg/l (with Multi 36x0 up to 400.000 mg/l)
Selectable measuring range (day)	1 to 7 with Multi 36x0: 0,5 h to 180 days)
Selectable sample volume (ml)	22.7 ; 43.5 ; 97.0 ; 164 ; 250 ; 365 ; 432 (freely selectable with Multi 36x0 IDS)
Display	LCD graphic, backlit
Control LED	RGB
Battery	1 x CR 2450
Capacity	Up to 99 heads

That's the way to introduce....

- Sales starting end of April
- Orders for old sets/heads: As long as stock lasts
- OxiTop®-C and OxiTop®-C/B heads for replacement purpose only
- If stock is empty: inform customer, new quotation...

Old and new...

Old		New		Comment	List price old	List price new
208130	OxiTop®-C IS 6	209714	OxiTop®-IDS IS 6	Extension set	2768	3211
208133	OxiTop®-C IS 12	209716	OxiTop®-IDS IS 12	Extension set	5000	5714
208196	OxiTop® Control S 6	209710	OxiTop®-IDS Set 6	Separate order for Multi necessary	4946	3376
208198	OxiTop® Control S 12	209712	OxiTop®-IDS Set 12	ditto	7320	5879
208201	OxiTop® Control 6	209710	OxiTop®-IDS Set 6	ditto	3762	3376
208204	OxiTop® Control 12	209712	OxiTop®-IDS Set 12	ditto	6129	5879
208830	OxiTop®-C	209700	OxiTop®-IDS	Replacement	399	419
208831	OxiTop®-C/B	209701	OxiTop®-IDS/B	Replacement	407	448
208823	OxiTop®-C 2	209702	OxiTop®-IDS 2	Replacement	779	799
208822	OxiTop®-C 6	209704	OxiTop®-IDS 6		2199	2399
208207	OxiTop® OC 110	Multi 3620 IDS SET WL or Multi 3630 IDS SET WL	2FD56W or 2FD57W		1279	1279
208208	OxiTop® OC 100				1973	2144
208220	OxiTop® Control A 6	209720	OxiTop®-IDS A6	ditto	6518	4483
208222	OxiTop® Control A 12	209722	OxiTop®-IDS A12	ditto	8997	6953
208225	OxiTop® Control AN 6	209724	OxiTop®-IDS AN6	ditto	7254	5027
208227	OxiTop® Control AN 12	209726	OxiTop®-IDS AN12	ditto	10420	8314
208230	OxiTop® Control B 6	209728	OxiTop®-IDS B6	ditto	5159	3149
208231	Oxitop Control B 6M-2.5	209732	OxiTop®-IDS B6M-2.5	ditto	5453	3332
208232	OxiTop® Control B 6M	209730	OxiTop®-IDS B6M	ditto	5199	3525

Marketing

- Flyer German/English
- (OECD Video (planned))
- Internet-Newsletters
- Internet-Portals
- Application reports have to be adapted

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Good luck!