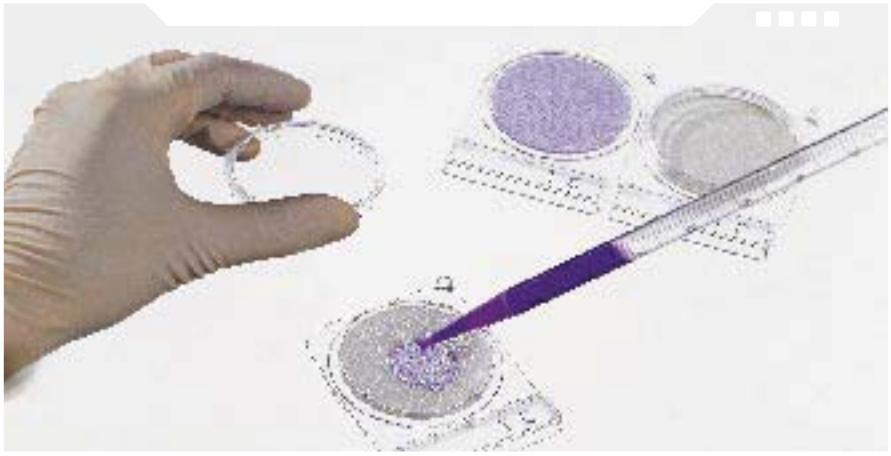
HyServe



Compact Dry

Easy test method for counting micro-organisms

KEY diagnostics
Tel : 02 8212 4074
Fax: 02 9423 6692
www.keydiagnostics.com.au
PO Box 1038 Gymea NSW 2227

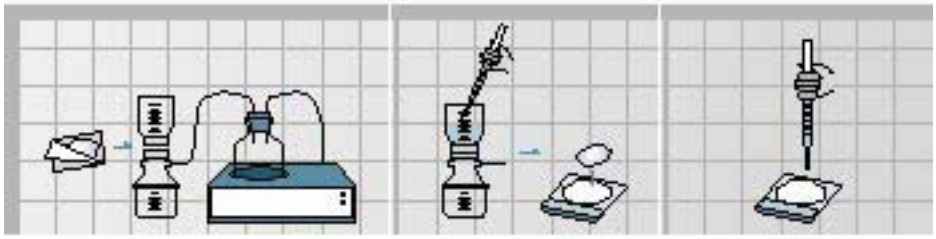
Compact Dry – An easy test method for counting micro-organisms

Compact Dry is a *ready-to-use* test method which helps to reduce the time needed to perform microbial testing. Therefore, it allows maximum productivity by increasing efficiency. The plates can be used to test raw materials as well as finished products like food, beverage, meat, cosmetic or other samples. The Compact Dry plates can also be used as a contact plate for difficult areas using the Compact Dry swab.

Compact Dry is an *easy-to-read* results test method. Place 1ml of sample onto the plate, the liquid samples will self diffuse evenly over the whole plate. Incubate the plates at the temperature specified in the package inserts. The grown colonies are pigmented with different colours, developed by chromogenic substrates and redox indicators. The type of bacteria is identified by its colour. For further investigation bacteria can be easily selected.

Product	Incubation time	Incubation temperature
Compact Dry TC for total count	48 hours	35 ± 2° C° (20 – 42°C)
Compact Dry EC for *E. coli* and coliform	24 hours	35 ± 2°C
Compact Dry CF for coliform	18 – 24 hours	35 ± 2°C 40 – 42°C for faecal coliforms
Compact Dry YM for yeast and mold	3 – 7 days	25 – 30°C
Compact Dry ETB for enterobacteriacae	24 – 48 hours	35 – 37°C
Compact Dry SA for *Staphylococcus aureus*	48 hours	35 – 37°C
Compact Dry VP for *Vibrio parahaemolyticus*	18 – 24 hours	35 – 37°C
Compact Dry TTC for total count in tea products	48 hours	35 ± 2°C
Compact Dry ETC for enterococci	20 – 24 hours	35 ± 2°C
Compact Dry SL for salmonella	20 – 24 hours	41 – 43°C

*Please use the incubation temperature/time according to the legal specification of each country's food analysis regulations.



Compact Dry is also an *easy-to-store* test method. The plates can be kept at room temperature for up to two years and can be used over an incubation temperature range of 20 – 42˚C.

Compact Dry is a very safe and convenient product. Its rigid structure allows for easy transportation and an unlimited number of units can be stacked safely in an incubator. The risk of contamination of the medium is eliminated by using the covering lid.

Additionally membrane filters can be tested using Compact Dry plates. Filter 100 ml water or any other liquid using an ordinary membrane filter (e.g 47 mm, 45 µm), then pipette 1 ml of sterile water into the middle of the Compact Dry plate and place the filter on the Compact Dry plate. The filter should be trap side up. Colonies will grow on the filter.

Membrane filter method: procedure for Compact Dry

- Select a Compact Dry TC Plate, remove the plate cap and pipette 1 ml of sterile water into the middle of the dry sheet.
- Using sterile tweezers pick up a sterile membrane filter.
- Remove the funnel from a sterilized filtering device and set the sterilized membrane filter.
- Set the funnel, pour the sample water into the funnel and filter the sample water under reduced pressure.
- After filtering the sample, wash the inner surface of the funnel with 20 – 30 ml of sterile water and filter it. Repeat the same steps two or three times.
- Detach the funnel and take the membrane filter out with sterilized tweezers. Put the filter on the prepared Compact Dry TC plate avoiding any bubbles. The trap side is upper.
- Turn over the capped plate and put in an incubator for incubation under the prescribed condition.

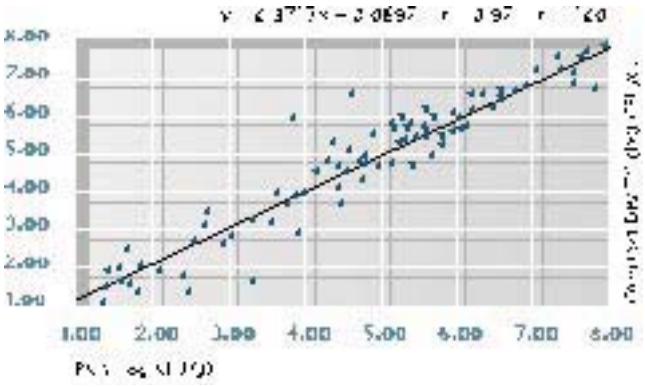
Compact Dry TC

Compact Dry EC

Compact Dry menu

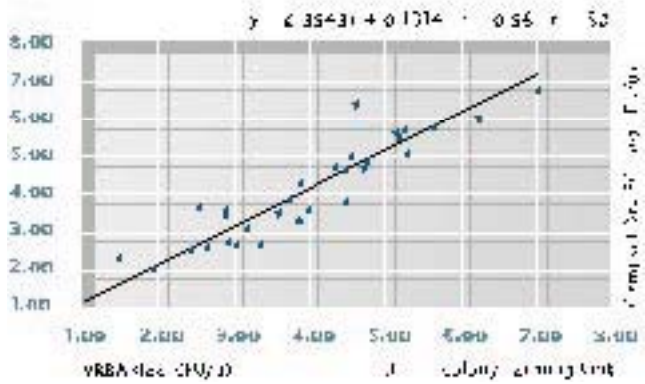
Compact Dry TC (Total Count) Bacteria form *red* colonies
Compact Dry TC is a medium for total viable bacterial count, which contains nutrient standard agar. The colonies grown on Compact Dry TC are red due to redox indicator tetrazolium salt.

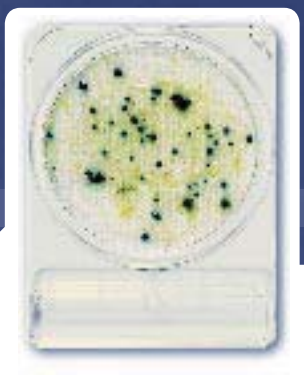
Regression line data from Compact Dry TC method plotted versus the conventional PCA method (standard plate count agar) shows a good correlation per 100 food samples for the population of me-sophilic aerobic micro-organisms.



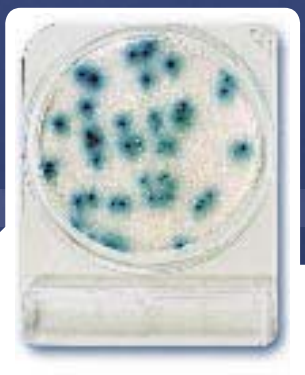
Compact Dry EC (*E. coli* and coliforms)
Bacteria form *blue and red* colonies
Compact Dry EC is a medium for *E. coli* and coliforms. The medium contains two kinds of chromogenic enzyme substrates: Magenta-Gal and X-Gluc. *E. coli* forms blue colonies. The total coliform group count is the sum of both the red and blue colonies.

Regression line data from Compact Dry EC method plotted versus the conventional VRBA method (violet red bile agar) shows a good correlation per 50 food samples for the population of coliforms. Compact Dry EC is AOAC approved.





Compact Dry CF



Compact Dry YM

Compact Dry CF for coliform

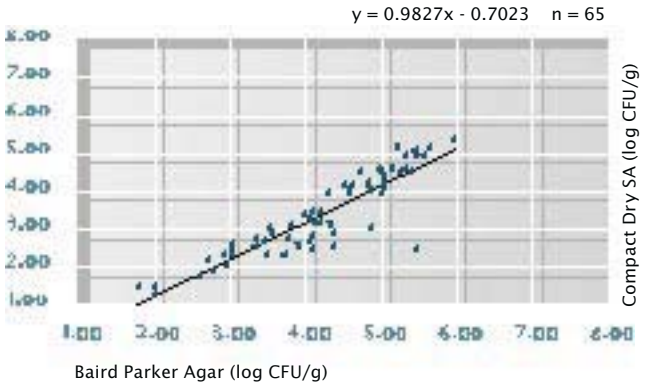
For the detection of coliforms Compact Dry CF is an easy tool. Coliforms grow with blue/blue green colonies as the recipe contains the chromogenic enzyme substrate X-GAL. The growth of bacteria other than coliforms is mainly inhibited but in case of growth they form colourless colonies. Compact Dry CF is AOAC approved.

Compact Dry YM for yeast and mould

With Compact Dry YM yeasts and mould can be differentiated by colour development. The medium contains the chromogenic enzyme substrate X-Phos which turns blue with many yeasts. Moulds form fluffy colonies with a characteristic colour. Antibiotics inhibit the growth of bacteria. The Compact Dry YM allows a very good 3-dimension growth of yeast and mould. Compact Dry YM is AOAC approved.

Compact Dry SA for *Staphylococcus aureus*

Compact Dry SA is a medium used to determine *Staphylococcus aureus* by means of selective growth and differentiation by the egg yolk reaction. This product consists of a Compact Dry SA plate which is based on improved mannitol salt agar. *Staphylococcus aureus* generates yellow pigments which result in light yellow colonies. The lipid-protein complex (lecithin) in the egg yolk reaction is split by lipase which changes the peripheral medium around the colonies to turbid white.

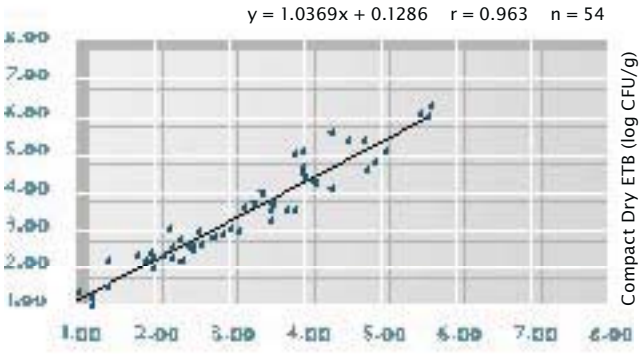


Compact Dry ETB

Compact Dry ETC

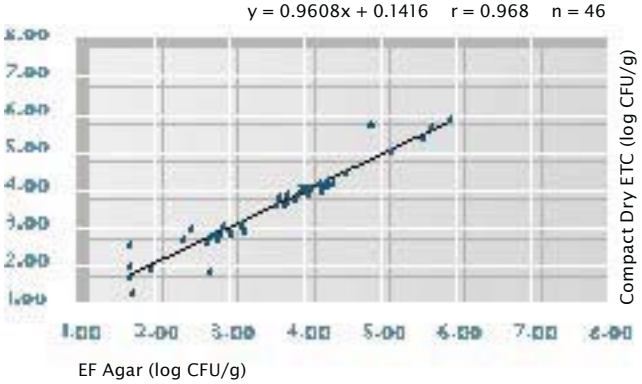
Compact Dry ETB for Enterobacteriacae

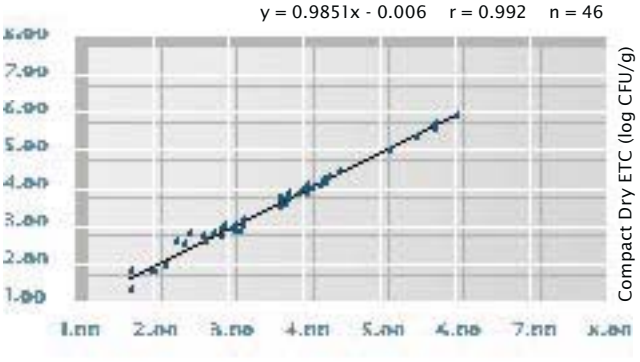
Using Compact Dry ETB it´s very easy to detect Enterobacteriacae. It´s substrates allows the easy differentiation of the Enterobacteriacae from other groups.



Compact Dry ETC is a new plate for easy detection of Enterococci in food and water

Enterococci occur and grow in a variety of fermented foods. The presence of enterococci in food products has long been considered as an indication of poor sanitary conditions during production and processing. On the other hand, fermented foods containing enterococci, have a long history of safe use. It is also claimed that enterococci play an important role in the development of the organoleptic properties of the fermented foods. For water, the presence of enterococci serves as an indicator of faecal contamination. Enterococci in water only comes from human or animal faeces. The Compact Dry ETC is based on the usage of X-glucoside (X-Gluc.) and antibiotics as selective agents. Enterococci will grow with blue to blue green colonies after incubation for 24 hours at 37˚C.





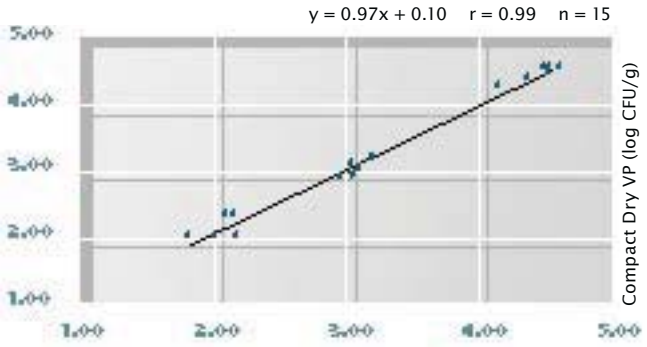
Compact Dry SL for Salmonella

Compact Dry SL detects salmonella using 20 – 24 hour pre-enrichment cultures. The plates are based on the combination of three different test principles:

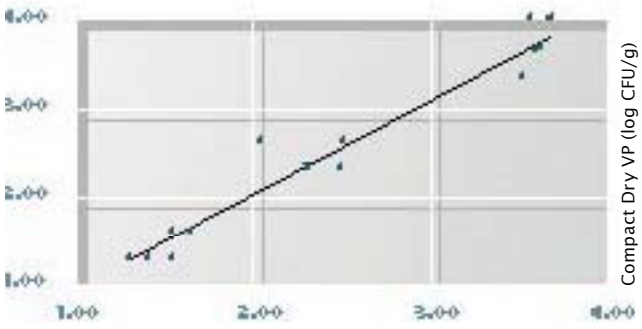
1. Allalization of the medium, by Salmonella's lysine decarboxylase ability(the medium colour will change from blue-purple to yellow);
2. Greening of the colony, caused by decomposition of chromogenic substrate with a specific enzyme of Salmonella (black colonies are generated by hydrogen sulphide producing Salmonella);
3. the motility of Salmonella.

Compact Dry VP for *Vibrio parahaemolyticus*

Vibrio parahaemolyticus is a bacterium that can cause cholera. *Vibrio parahaemolyticus*-associated gastroenteritis is the infection caused by this organism. *Vibrio parahaemolyticus* naturally inhabits coastal waters and is present in higher concentrations during the summer; it is a halophilic, or salt-requiring organism. *Vibrio parahaemolyticus* is found in marine environments, sea foods, and the feces of patients with acute enteritis. Compact Dry VP can not only easily detect *Vibrio parahaemolyticus*, but also differentiate *Vibrio parahaemolyticus* from other vibrios. The product contains a specific chromogenic substrate for *Vibrio parahaemolyticus* which develops blue/green or blue colonies, whereas other vibrios develop white colonies.



FDA BAM Method: Colony Hybridization (log CFU/g)



FDA BAM Method : MPN (log CFU/g)

Detection of lactic acid bacteria using Compact Dry TC

For the detection of lactic acid bacteria it is recommended to use Compact Dry TC. Samples should be diluted using sterilized saline and incubated under anaerobic conditions.

Approval

Compact Dry TC is AOAC validated : AOAC No. 010404

Compact Dry TC is approved by:

- Servico Publico Federal; Minsterio da agricultura, pecuaria e ae Astecimento; Brazil No. AUP/CGI/DIPOA No. 0453/2006
- Microbiological Methods Committee; Microbiology Evaluation Division; Bureau of Microbial Hazards, Food Directorate, Health Products and Food Branch, Health Canada; Ottawa, Ontario K1A 0L2
- The plates are MicroVal approved: The first certificate for Compact Dry TC European validation and certification alternative methods according to EN ISO 16140 No: MV-20070320-001-LRQA

These plate are also ISO 16140 validated. Compact Dry plates are produced at an ISO 9001 certified site.

References

Hasan Aycicek, Utku Oguz, Koray Karci (2006)
Determination of total aerobic and indicator bacteria on some raw eaten vegetables from wholesalers in Ankara, Turkey. Int. J. Hyg. Environ.-Health 209: 197–201

Nissui Pharmaceutical granted PTM status for Compact Dry TC, Inside Laboratory Management; AOAC, July 2004: 19–22

Bachmann, B., Lüthi, M. (2003)
Evaluation mikrobiologischer Methoden zur Prüfung von Trinkwasser im Feld für Katastropheneinsätze. Mitt. Lebensm. Hyg. 94: 579–593

Ellis P., Kirchhof G. and Meldrum R. (2003)
Evaluation of the Compact Dry SL method for the detection of Salmonella in spiked food samples. Poster presentation at HPA 1st Scientific Conference, University of Warwick, September 2003.

Ellis, P. and Meldrum R. (2002)
Comparison of the Compact Dry TC and 3M Petrifilm ACP dry sheet media methods with the spiral plate method for the examination of randomly selected foods for aerobic colony count. J. Food Prot. 65: 423–425

Ellis P and Meldrum RJ (2001)
Evaluation of dryfilm methods for aerobic colony counts. Poster presentation at PHLS 26th Scientific Conference, University of Warwick, September 2001

Mizuochi, S. and Kodaka, H. (2000)
Evaluation of dry sheet medium culture plate (Compact Dry TC) method for determining numbers of bacteria in food samples. J. Food Prot. 63: 665–667

Mizuochi, S., Kamiya, H., Kodaka, H., Sengoku, H., and Horigome, K.
Compact Dry for the Enumeration of Bacteria in Food. ASM 1999 General Meeting, Chicago 1999

Kodaka, H. and Ishikawa, M. (1995)
Evaluation of new medium with chromogenic substrates for members of the family Entero-bacteriaceae in urine sample. J. Clin. Microbiol. 33: 199–201.

Curiale, M.S. and Sons, T., et. al (1991)
Dry rehydratable film for enumeration of total coliforms and escherichia coli in foods:
Collaborative study. J. Assoc. Off. Anal. Chem. 74: 635–648.

Features and benefits

Compact Dry combines the features and benefits of the traditional plate media with the modern features of dehydrated film media.

This unique combination will shorten your test time and increase your lab efficiency, thus reducing your costs.

Steps	Criteria	Homemade plates	Prepared plates	Other dehydrated films	Compact Dry
Preparation and storage	Ready to use		■	■	■
	Long shelf life RT				■
	Small size (for storage and disposal)			■	■
Inoculation (simple and fast)	Liquid samples	■	■	■	■
	Surfaces			■	■
Incubation	Easy handling (rigid plastic)	■	■		■
	Small size			■	■
	100% sterile (safe cover)	■	■		■
	Stackable	■	■		■
	No direct contact with media				■
Reading and interpretation	Easy counting (chromogenic)		■	■	■
	Easy picking and cloning	■	■		■
Validation	Standardization of the production		■	■	■
	Validation Approvals		■	■	■

Compact Dry Swab for surfaces, meat and dry areas

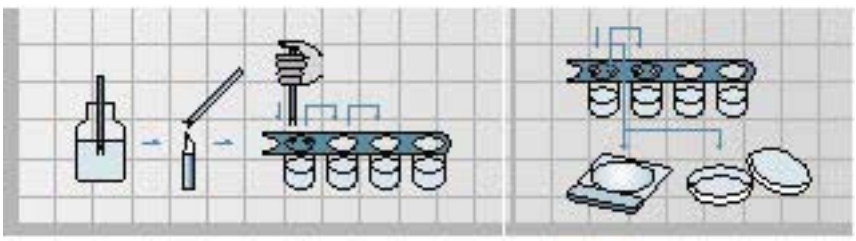
Compact Dry Swab is a very easy to use tool for the sampling of difficult areas, swabbing food (e.g. meat) or checking dry surfaces.

- Screw out the Swab and wipe over your test area.
- Close the Swab and invert several times in order to release the micro-organisms into the liquid.
- To open, hold the swap by the orange area and invert. To release the sample press smoothly in the middle and 1 ml of sample will be dispensed onto the plate.
- The Compact Dry Swab contains 1 ml Peptone Buffered Saline.
- The Compact Dry Swab can be stored anywhere at room temperature for up to 2 years.

Dilution rack for easy Serial Dilutions

The Dilution Rack contains 4 wells of 9 ml sterile Buffered Sodium Chloride Peptone Solution. By pipetting 1 ml from one well to the next, it allows easy and fast 10-fold dilutions of your samples.

- Insert the Opener into the aluminium seal and pierce two holes. The opener can be decontaminated using either an alcohol solution/wipe or by placing directly into a flame.
- Dispense 1 ml of the specimen with a clean pipette into the holes.
- Insert a second pipette into the second hole and homogenize the specimen.
- Remove 1 ml of the homogenized specimen and place it onto the Compact Dry plate.
- To dilute further, repeat the above steps.
- Each vial contains 9 ml Phosphor buffered Saline.
- Can be stored anywhere at room temperature for up to 1 year.



Product overview

	ID-Number	Packaging	Application
Compact Dry TC	1 000 166	40 plates	Total Count
	1 000 167	240 plates	
	1 002 877	920 plates	
Compact Dry EC	1 000 168	40 plates	*E.coli* and coliforms
	1 000 169	240 plates	
	1 002 878	920 plates	
Compact Dry CF	1 000 867	40 plates	Coliforms
	1 000 868	240 plates	
	1 002 879	920 plates	
Compact Dry YM	1 000 869	40 plates	Yeast and mould
	1 000 870	240 plates	
	1 002 880	920 plates	
Compact Dry ETB	1 002 941	40 plates	Enterobacteriacae
	1 002 942	240 plates	
	1 002 943	920 plates	
Compact Dry SA	1 000 899	40 plates	*Staphylococcus aureus*
	1 001 013	240 plates	
	1 002 881	920 plates	
Compact Dry SL	1 002 973	40 plates	Salmonella
	1 002 938	240 plates	
	1 002 940	920 plates	
Compact Dry VP	1 000 900	40 plates	*Vibrio parahaemolyticus*
	1 001 014	240 plates	
	1 002 882	920 plates	
Compact Dry TTC	1 006 732	40 plates	Total count for tea products; with catechin inactivator
	1 006 731	240 plates	
Compact Dry ETC	1 002 944	40 plates	Enterococci
	1 002 945	240 plates	
	1 002 946	920 plates	
Compact Dry Swab	1 002 953	40 tubs/box	for surface
	1 002 952	240 tubs/box	
Dilution Rack for Compact Dry	1 000 888	(4 wells x 3) x 10 = 120 wells/ 1 box	for dilutions
Opener for Dilution rack	1 000 887	1 piece	for sterile opening
Egg Yolk Suspension	1 002 755	40 plates	for Compact Dry SA
Incubox	1 000 048	1 piece	Small Incubator for Food stamps and/or Compact Dry

HyServe

HyServe GmbH & Co. KG.

Hechenrainer Str. 24
82449 Uffing
Germany

www.hyserve.com
info@hyserve.com

Tel +49 (0) 88 46-13 44
Fax +49 (0) 88 46-13 42