

# Product Information

## MEAT 5.0

LCD-Array Kit



DNA based identification of 17 meat & 7 poultry species/genera



### Simple

PCR based macro array assay on polymer supports.



### Robust

Non fluorescent detection chemistry.



### Fast

90 minutes PCR, 45 minutes array protocol.



### Cost efficient

Minimal lab instrumentation required.



### Reliable

Automatic, software assisted data read-out.

Technology for your daily routine.

## Assay Principle

Using the provided primer mix, biotinylated PCR products are generated from DNA extracts of food matrices containing ingredients of animal origin (meat, milk or eggs). The labeled amplicons are hybridized to species specific capture probes immobilized on the LCD-Chip surface. Following a short wash routine, comprising high stringency, visualization of bound amplicons is mediated by an enzyme-substrate cascade. Each LCD-Chip contains eight identical micro arrays separated in small reaction chambers which can be addressed individually.

## Target Region & Sensitivity

The primer mix is directed against highly conserved motifs within the mitochondrial 16S rRNA genes of vertebrates. Specific capture probes immobilized as duplicates permit the simultaneous detection of 24 mammal and bird species/genera most commonly used in food preparations. Due to the small amplicon sizes (120 - 130 bp) the assay is also well suited for the analysis of sample material which underwent intensive processing. Depending on the starting material, additions of less than 0.5 % material from any species can be detected within a background of 99.5% material from other species.

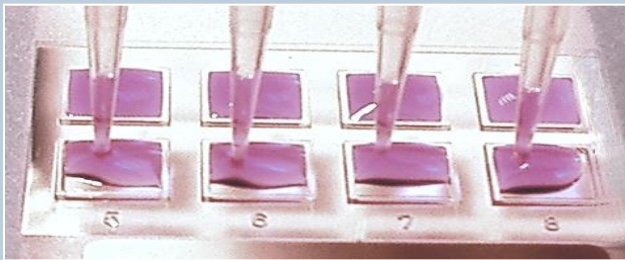


Fig.1: Parallel analysis of eight samples on one LCD-Chip. The array field spacing is compatible with standard multi pipettes.

01	Hyb-Control	
02	Cattle	<i>Bos taurus, B. bison</i>
03	Sheep	<i>Ovis aries</i>
04	Equine	<i>E. caballus, E. asinus</i>
05	Goat	<i>Capra hircus</i>
06	Camels	<i>Camelus sp.</i>
07	Buffalo	<i>Bubalus bubalis</i>

08	Pork	<i>Sus scrofa</i>
09	Kangaroo	<i>M. rufus, M. giganteus</i>
10	Hare	<i>Lepus europaeus</i>
11	Rabbit	<i>Oryctolagus cuniculus</i>
12	Reindeer	<i>Rangifer tarandus</i>
13	Roe Deer	<i>Capreolus capreolus</i>
14	Red Deer	<i>Cervus elaphus</i>
15	Fallow Deer	<i>Dama dama</i>
16	Springbok	<i>Antidorcas marsupialis</i>
17	Canine / Dog	<i>Canis sp.</i>
18	Cat	<i>Felis silvestris</i>
19	Chicken	<i>Gallus gallus</i>
20	Turkey	<i>Meleagris gallopavus</i>
21	Goose	<i>Ansa albifrons</i>
22	Ostrich	<i>Struthio camelus</i>
23	Mallard Duck	<i>Anas platyrhynchos</i>
24	Muscovy Duck	<i>Cairina moschata</i>
25	Pheasant	<i>Phasianus colchicus</i>

## Array Pattern

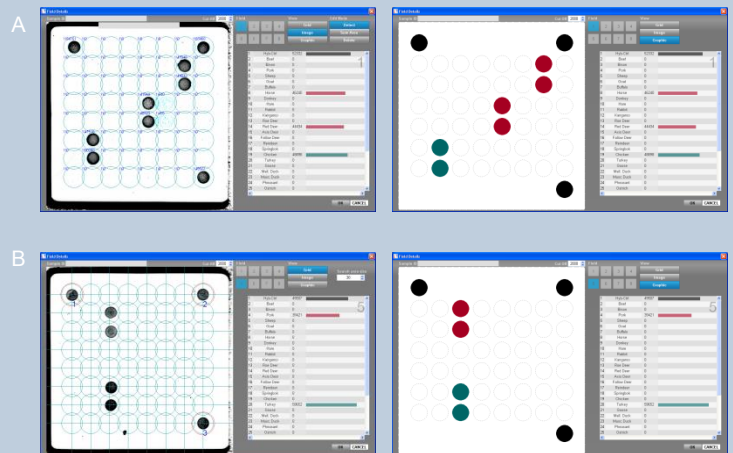
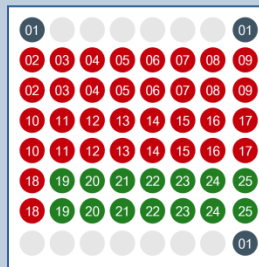
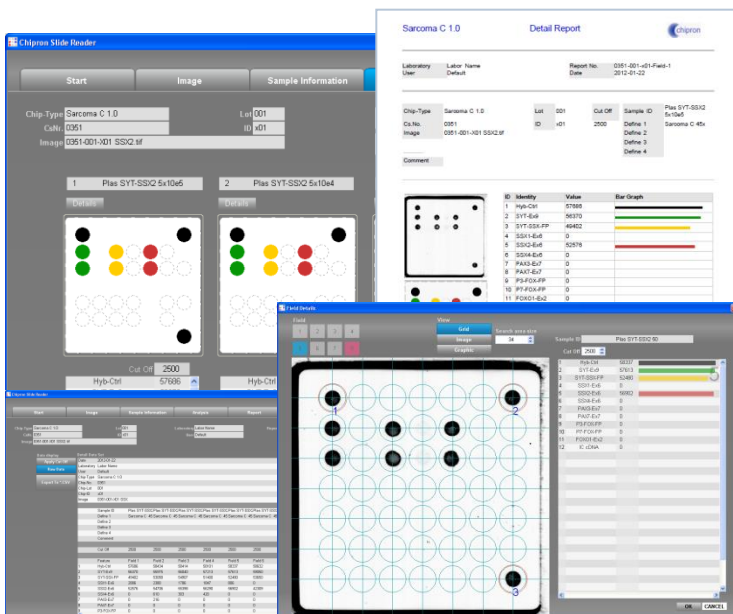


Fig.2 A: 80 % Red Deer meat spiked 19 % Chicken and 1 % Pork  
B: 99% Turkey meat spiked with 1 % Horse meat

## Software

SlideReader V12

- Fully automated image analysis
- Data reports in PDF format
- Win XP & WIN7 compatible



## Instruments

CHIP-Scanner PF7250u



- Transmission light scanner for LCD-Arrays,
- 10 µm resolution

CHIP Spin FVL2400



- Bench Top mini centrifuge
- 2400 rpm, constant
- Adaptor for LCD-Arrays

Order Information		Cat. N°.
MEAT 5.0	LCD-Array Kit, 32 Tests	A-500-04
MEAT 5.0	LCD-Array Kit, 96 Tests	A-500-12
CHIP-Scanner PF7250u		HS-500-01
CHIP-Spin FVL2400		HS-300-01
SlideReader Software		HS-200-01