

MAR 9, 2011

ITM04 had ears bonded Sept. 2010 w/ Marielle

Today Prisms were glued. S1 - prism side 1 92.5 mm  
S2 - ear side 2 = 70.06 mm S2 - prism side 2 92.7 mm  
S1 - ear side 1 = 70.02 mm tol = ± 0.1 mm so Δ 0

ITM01 1st ear bonded ~4PM s/n 70

MAR 10, 2011

ITM04 Flag mounts/discs glued AM  
24 hr. heat lamp cure started

ITM01 2nd ear bonded AM s/n 71  
S1 - ear side 1 = 70.00 mm  
S2 - ear side 2 = 70.00 mm

ETM04 1st ear bonded 3PM

Measured this

WEIGHT

ETM02 39.

ETM03 39

HOLM

ETM04 39.

ETM05 39

ITM01 39

meas in sept → ITM04

ITM05 39

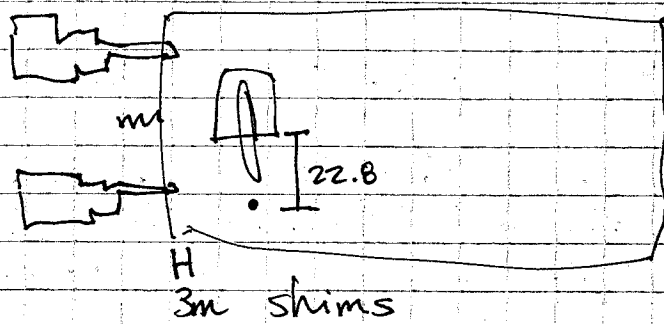
ITM08

MAR 10, 2011

ETM04 ✓ S3 → bubbles did not disappear  
→ at 4.35 PM decision made to debond  
→ rinsed with DI for 5 to 10 minutes until ear came off.

→ cleaned thoroughly with cerium oxide and bicarb.

R10,11 PRACTICE EARS - Just glue, says Marielle & use following:



USE LEFT SIDE JIG 1

Glue Discs in plates  
Then glue ears on  
as per

This gives the ear  
centered between  
ends of plate  
So you can use  
them on PEN or TM.

"PRACTICE NOTCHED" Ears  $\Rightarrow$  PEN

"PRACTICE STANDARD" Ears  $\Rightarrow$  TM

Inventory:

3 Plates

8 plates on order

7 stand. ears

7 notched ears

6 Ear/Puck bonded sets + 1 in plate

8 blank pucks

4 sets Ear/Puck/Plates installed on Lto pract. setup

USE HOLY ETM03 for 1-arm PEN ETM  
& LASTI PEN for 1-arm PEN ITM

MAR 11, 11

AP Adhesive on aluminium tray has dried  
→ for magnet flag bases on ITM04

Selected ear 77 as replacement for ear 85 for  
ETM04 S3

Switched off heat lamps and put it back into its  
container. → ITM04

Stored ITM04 → finished

Stored ITM01 → still needs prisms and magnet  
flag bases.

10.30 → Bonded ear 77 to ETM04 side S3  
→ looks much more promising this time

12.00 → Bonded ear 87 to ETM03 side S3  
→ many bubbles

Ear 77 side S3 ETM 04

S1 - ear side 1 70.0

S2 - ear side 2 69.95

Ear 87 side S3 ETM03

S1 - ear side 1 69.93

S2 - ear side 2 70.05

Ear 86 side S4 ETM04

have had to debond after 1.0 hr.

→ has left quite a few scratches on ear  
and ETM04 S4

MAR 12, 11

- Bonded ear 94 to ETM 04 surface 54
- Bonded ear 89 to ETM 03 surface 54

• LIST OF THING TO IMPROVE

- shim size on sink
  - teflon pads under V-blocks
  - clean other V-block
  - teflon pad for measurements
  - prism holder redesign.
  - prism holder screw
  - Alpha wipes
  - Bicarbonate of soda
  - scan notes and put on DCC
  - put ears in Pyrex dish
- } Mariette

# Bond quality monitoring sheet

Ear no.	70	Bonding solution	sodium silicate
Mass	ITM01	Vol. concentration	1:6
Bonding flat	53	Time prepared	13.45
Date and time bonded	09/03/11	Amount used for bonding	9.60 $\mu$ l

Bond made  
Had to hold to  
ear as it wanted  
to slide  
for several minutes

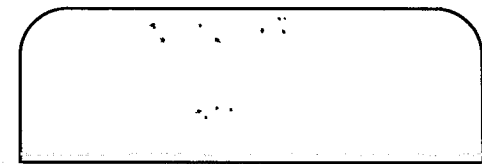
Date: 09/03/11

Time: 16.00



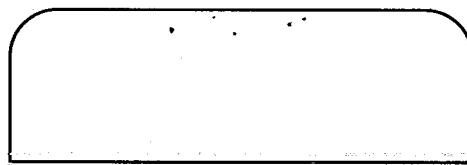
Date: 09/03/11

Time: 16:10



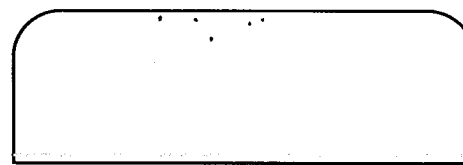
Date: 09/03/11

Time: 16.40



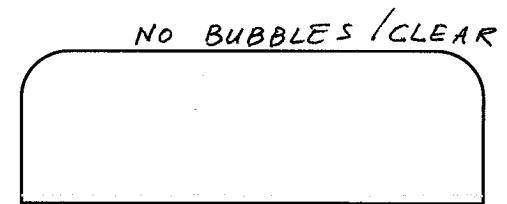
Date: 09/03/11  
17.25

Time: 17.25



Date: 09/03/11

Time: 17.50



Date: 10/03/11

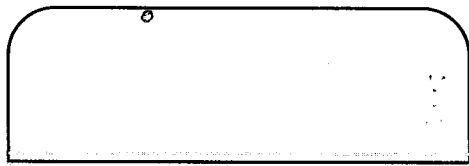
Time: 9.15

↑  
REMOVE  
JIG

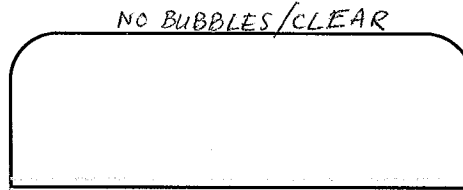
position ear checked  
70.04 and 70.06

# Bond quality monitoring sheet

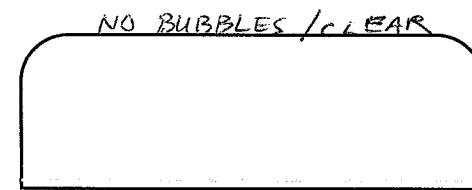
Ear no.	71	Bonding solution	sodium silicate
Mass	1TMO1	Vol. concentration	1:6
Bonding flat	S4	Time prepared	11.00
Date and time bonded	10/03/11 11.45	Amount used for bonding	9.6 $\mu$ l



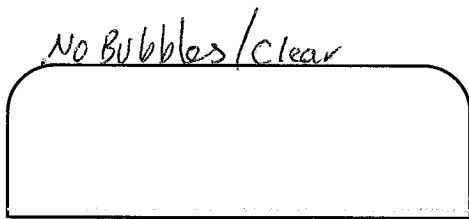
Date: 10/03/11  
Time: 11.45



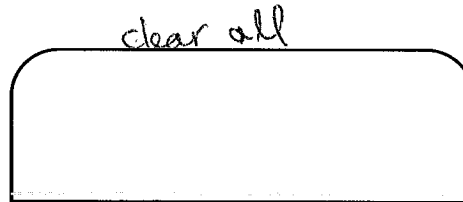
Date: 10/03/11  
Time: 12.15



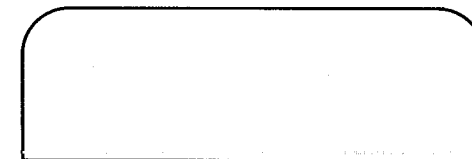
Date: 10/03/11  
Time: 12.45



Date: 10/03/11  
Time: 1:15



Date: 10/03/11  
Time: 1:45

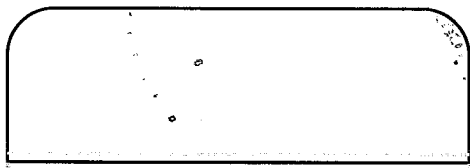


Date: \_\_\_\_\_  
Time: \_\_\_\_\_

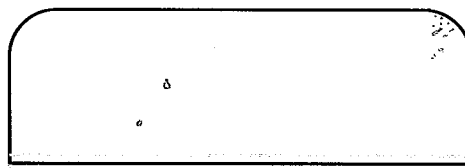
↑  
REMOVED JIG 14.10  
70.00 - 70.00

# Bond quality monitoring sheet

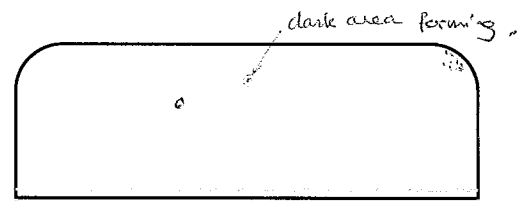
Ear no.	77	Bonding solution	sodium silicate
Mass	ETM04	Vol. concentration	1:6
Bonding flat	S3	Time prepared	9.30 am
Date and time bonded	11/03/11 10.30	Amount used for bonding	9.6 $\mu$ l



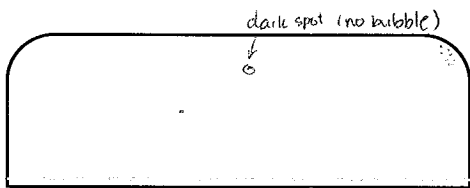
Date: 10/03/11  
Time: 10.40



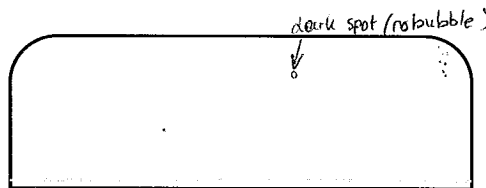
Date: 10/03/11  
Time: 11.05



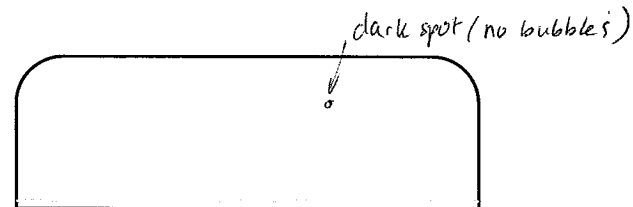
Date: 11/03/11  
Time: 11:35



Date: 11/03/11  
Time: 12.10



Date: 11/03/11  
Time: 12.40



Date: 12/03/11  
Time: 8.50

12.50  
remove jig

s1 - earside 70.6

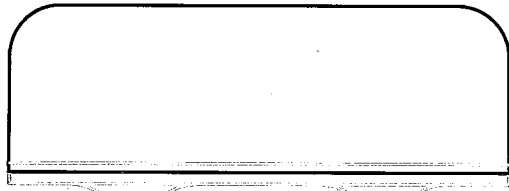
s2 - earside 69.95

# Bond quality monitoring sheet

Gerardo made this bond

Sigma-Aldrich  
S38743-1L  
bottle opened on  
15/09/2010

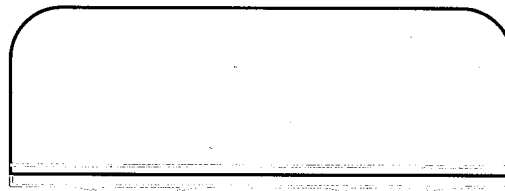
Ear no.	78	Bonding solution	sodium silicate
Mass	PUM 1TM 04	Vol. concentration	1:6
Bonding flat	S3	Time prepared	9:00
Date and time bonded	22/09/2010 10:52	Amount used for bonding	9.6 $\mu$ l



NO BUBBLES

Date: 22/09/2010

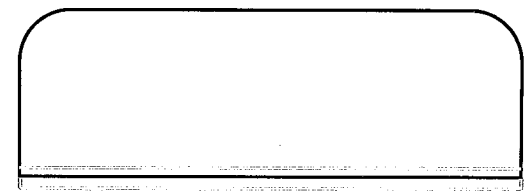
Time: 10:52



NO BUBBLES

Date: 22/09/2010

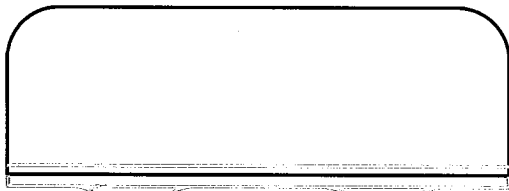
Time: 11:08



no bubbles

Date: 22/09/10

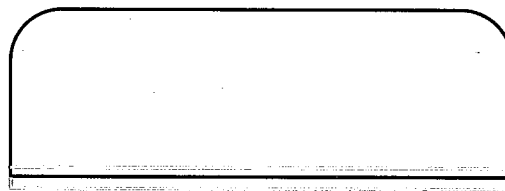
Time: 11:25



NO BUBBLES

Date: 22/09/2010

Time: 12:01



NO BUBBLES

Date: 22/09/2010

Time: 12:38



NO BUBBLES

Date: 22/09/2010

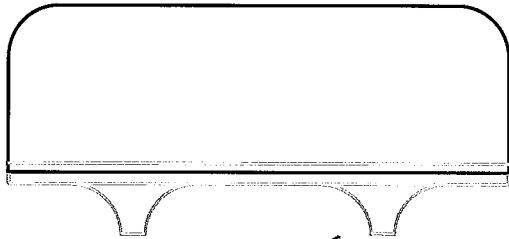
Time: 12:48 jig removed,



# Bond quality monitoring sheet

Bond made by Gerardo Moreno

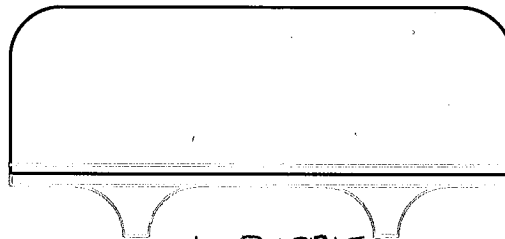
Ear no.	78	Bonding solution	sodium silicate sigma Aldrich 338443-1L bottle opened on 15/09/2010
Mass	PUM ITM 04	Vol. concentration	1:6
Bonding flat	S3	Time prepared	9:00
Date and time bonded	22/09/2010 10:52	Amount used for bonding	9.6 µl.



NO BUBBLES

Date: 22/09/2010

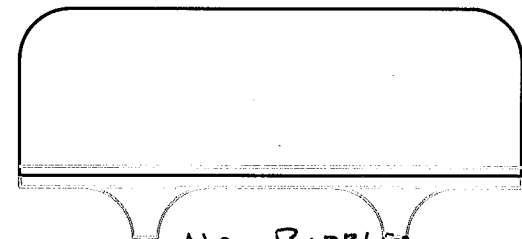
Time: 15:32



NO BUBBLES

Date: 22/09/2010

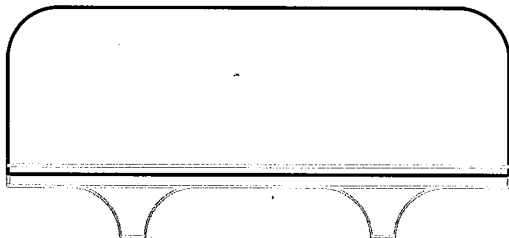
Time: 17:40



NO BUBBLES

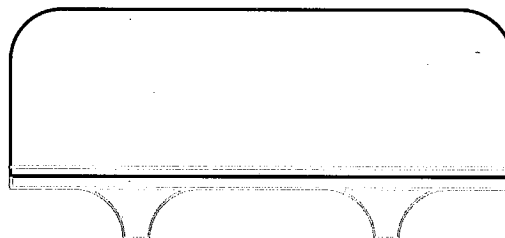
Date: 23/09/2010

Time: 10:00



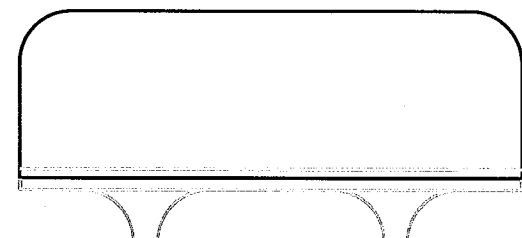
Date: 24/09/2010

Time: 10:00



Date: \_\_\_\_\_

Time: \_\_\_\_\_



Date: \_\_\_\_\_

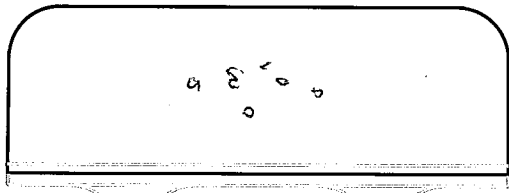
Time: \_\_\_\_\_

# Bond quality monitoring sheet

Bond made by Mariëlle van Veggel

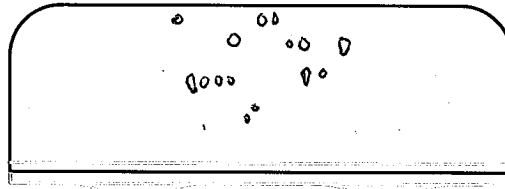
Sigma-Aldrich  
338443-1L  
bottle opened  
on 15/09/2010

Ear no.	84	Bonding solution	1:6 sodium silicate
Mass	PUM ITM 04	Vol. concentration	1:6
Bonding flat	S4	Time prepared	10:00
Date and time bonded	21/09/2010 11:35	Amount used for bonding	9.6 $\mu$ l

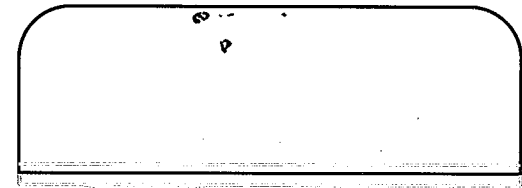


NOT A GOOD REPRESENTATION

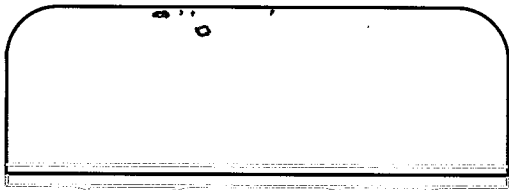
Date: 21/09/2010 CHANGES TOO FAST  
Time: 11:35



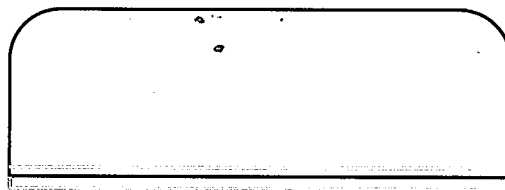
Date: 21/09/2010  
Time: 11:45



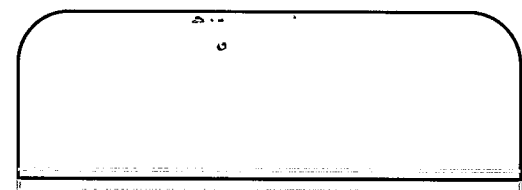
Date: 21/09/2010  
Time: 12:15



Date: 21/09/2010  
Time: 12:50



Date: 21/09/2010  
Time: 13:50



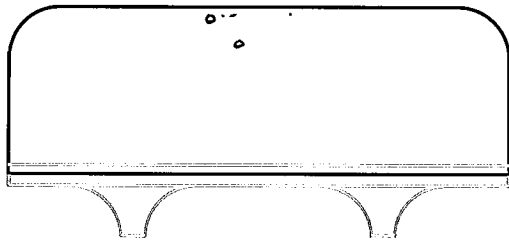
UNCHANGED

Date: 21/09/2010  
Time: 14:25

# Bond quality monitoring sheet

Bond made by Mariëtte van Veggel

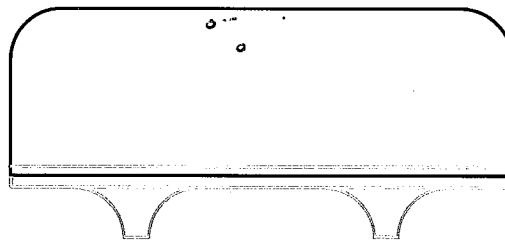
Ear no.	84	Bonding solution	sodium silicate	Sigma-Aldrich 338443-1L
Mass	PUM ITM 04	Vol. concentration	1:6	bottle opened on 15/09/2010
Bonding flat	54	Time prepared	10:00	
Date and time bonded	21/09/2010 11:35	Amount used for bonding	9.6 $\mu$ l	



UNCHANGED

Date: 21/09/2010

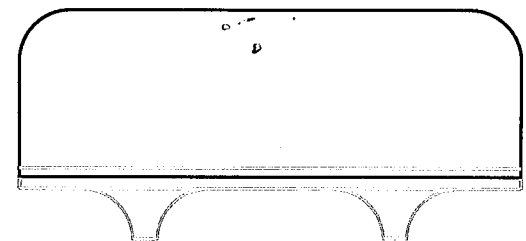
Time: 15.20



UNCHANGED

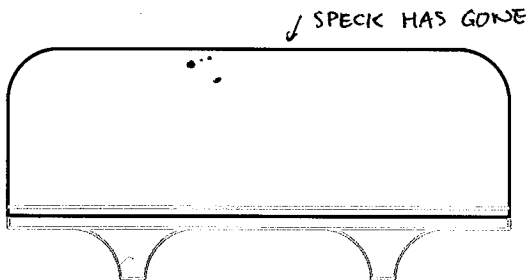
Date: 21/09/2010

Time: 16.20



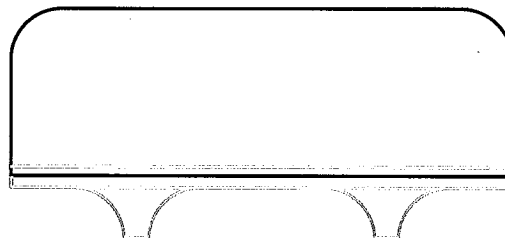
Date: 21/09/2010

Time: 17.30



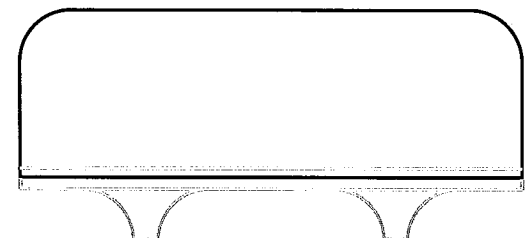
Date: 22/09/2010

Time: 8:45



Date: \_\_\_\_\_

Time: \_\_\_\_\_

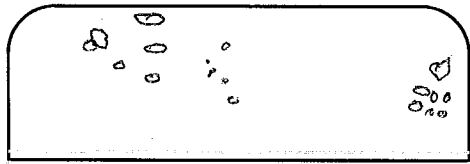


Date: \_\_\_\_\_

Time: \_\_\_\_\_

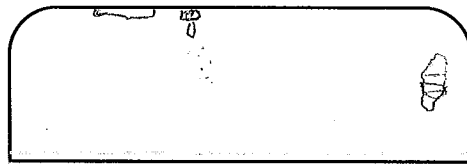
# Bond quality monitoring sheet

Ear no.	85	Bonding solution	sodium silicate
Mass	ETM 05	Vol. concentration	1:6
Bonding flat	S3	Time prepared	11.00
Date and time bonded	10/03/11 15.10	Amount used for bonding	9.6 $\mu$ l



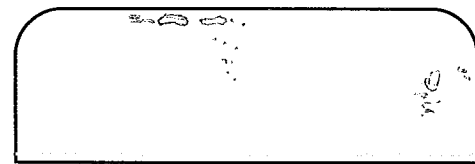
Date: 10/03/11

Time: 15.10



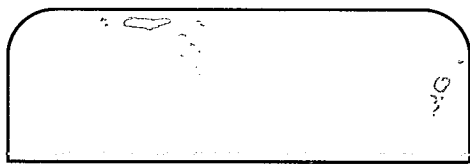
Date: 10/03/11

Time: 15:40



Date: 10/03/11 *Bubbled area*  $\sim 15 \text{ mm}^2$

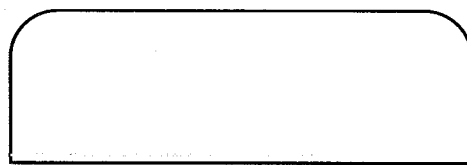
Time: 16:05 *total 1200 mm<sup>2</sup>*



Date: 10/03/11

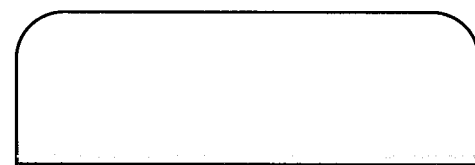
Time: 16.35

*decision to debond*



Date: \_\_\_\_\_

Time: \_\_\_\_\_



Date: \_\_\_\_\_

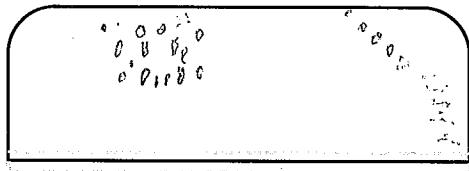
Time: \_\_\_\_\_

→ debonded after between 5 and 10 minutes

→ observed scratch both on ear and on mass ± where bubble was → was there a speck?

# Bond quality monitoring sheet

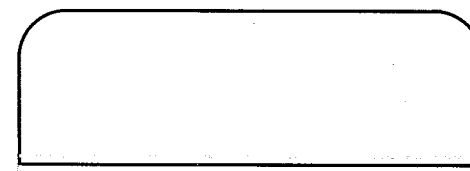
Ear no.	86	Bonding solution	sodium silicate
Mass	ETM04	Vol. concentration	1:6
Bonding flat	S4	Time prepared	9.30 AM
Date and time bonded	11/03/11 4 PM	Amount used for bonding	9.6 $\mu$ l.



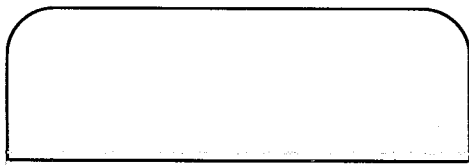
Date: 11/03/11  
Time: 4 PM



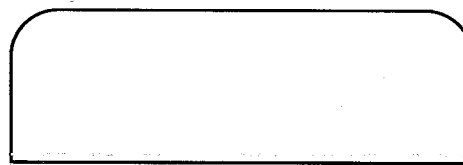
Date: 11/03/11  
Time: 4.30 PM  
4.45 decision to debond



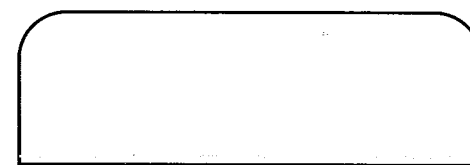
Date: \_\_\_\_\_  
Time: \_\_\_\_\_



Date: \_\_\_\_\_  
Time: \_\_\_\_\_



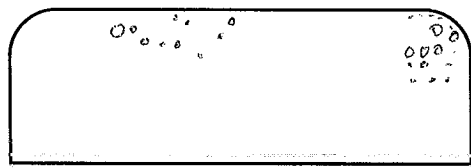
Date: \_\_\_\_\_  
Time: \_\_\_\_\_



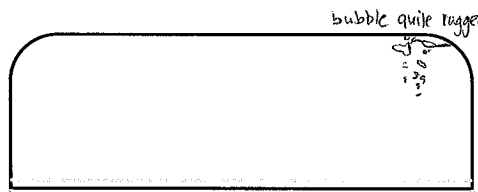
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

# Bond quality monitoring sheet

Ear no.	87	Bonding solution	sodium silicate
Mass	ETM 03 (holly mass)	Vol. concentration	1:6
Bonding flat	S3	Time prepared	9.30 am
Date and time bonded	11/03/11 12.05	Amount used for bonding	9.6 $\mu$ l.



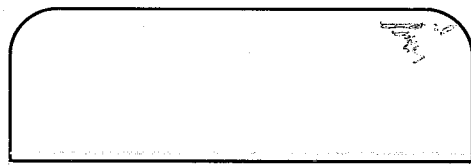
Date: 11/03/11  
Time: 12.10



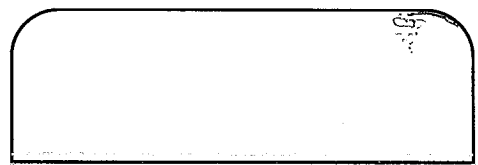
Date: 11/03/11  
Time: 12.40



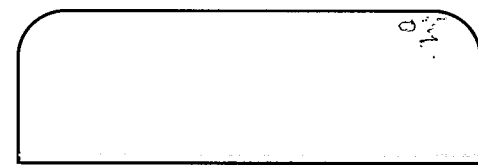
Date: 11/03/11  
Time: 13.10



Date: 11/03/11  
Time: 13.40



Date: 11/03/11  
Time: 14.10



Date: 12/03/11  
Time: 8.50

remove fig.  
S2 - ear side 2 70.05  
S1 - ear side 1 69.93

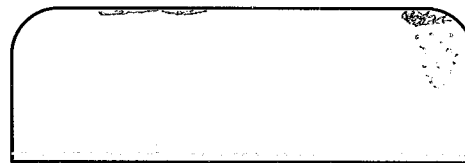
# Bond quality monitoring sheet

Ear no.	89	Bonding solution	sodium silicate
Mass	ETM03	Vol. concentration	1:6
Bonding flat	S4	Time prepared	9.00 AM
Date and time bonded	12/03/11 11.30	Amount used for bonding	9.6 µl.



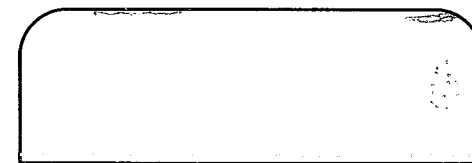
Date: 12/03/11

Time: 11.30



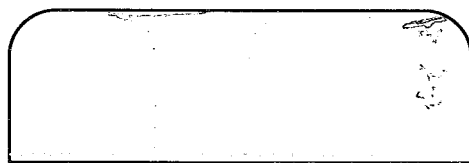
Date: 12/03/11

Time: 12.00



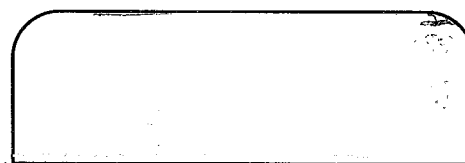
Date: 12/03/11

Time: 12.30



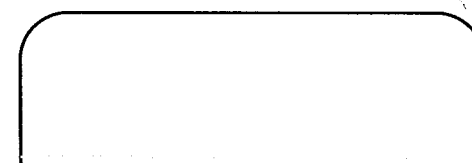
Date: 12/03/11

Time: 13.10



Date: 12/03/11

Time: 14.10



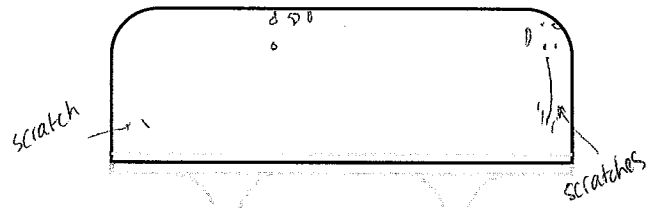
Date: \_\_\_\_\_

Time: \_\_\_\_\_

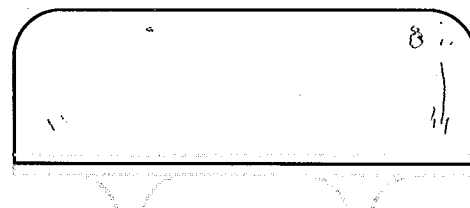
S1-earside1 70.02  
S2-earside2 70.00

# Bond quality monitoring sheet

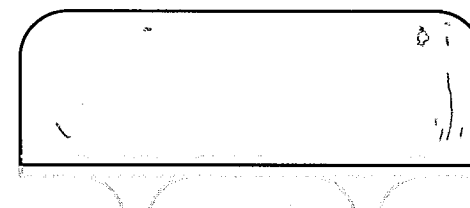
Ear no.	94	Bonding solution	sodium silicate
Mass	ETM04	Vol. concentration	1:6
Bonding flat	54	Time prepared	9.00 AM
Date and time bonded	12/03/11 10.10 AM	Amount used for bonding	9.6 $\mu$ l



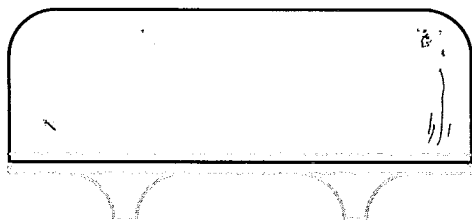
Date: 12/03/11  
Time: 10.15



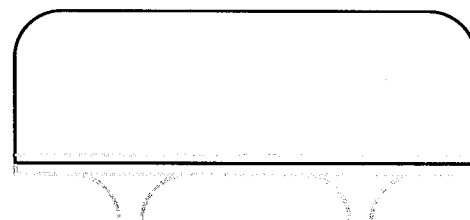
Date: 12/03/11  
Time: 10.45



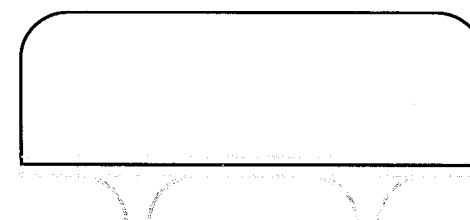
Date: 12/03/11  
Time: 11.30



Date: 12/03/11  
Time: 12.05



Date: \_\_\_\_\_  
Time: \_\_\_\_\_



Date: \_\_\_\_\_  
Time: \_\_\_\_\_

remove jig  
s2-ear side 2 70.12  
s1-ear side 1 69.80

200.08  
100.04

$$69.80 + 13.62 + 15.03 + 1.5 = 98.45 + 1.50 = 99.95$$