

# ITF Two-star Court Report

**Test code:** ITF RC 13/04  
**Classification code:** ITF CS/01/02-13-558  
**Test laboratory:** Labosport Ltd  
  
**Surface name:** Red Plus  
**Surface type:** Artificial clay (clay-dressed)  
  
**Test venue:** Tennis Club Cureglia  
 Via ai Grotti  
 6944 Cureglia  
 Switzerland  
  
**Court name:** No. 2  
  
**Last surfaced:** 1 June 2013

Test conditions:	Max	Min
Barometric pressure (kPa)	104	-
Ambient temperature (°C)	34	30
Surface temperature (°C)	36	32
Relative humidity (%)	35	31
Altitude (m)	431	-

**Prepared by:**   
 .....  
 David Rigby  
  
**Authorised by:**   
 .....  
 Colin Young  
  
**Distribution:** Copy 1 - Tennis Club Cureglia  
 Copy 2 - ITF  
  
**Test date:** 23 July 2013  
  
**Issue date:** 29 August 2013

**Visual inspection:** Recommended  
**Evenness:** Recommended  
**Slope and planarity:** Recommended  
**Dimensions:** Recommended  
**Court pace:** -  
  
**Court pace rating (CPR):** 15 Slow

# Test Results - Visual inspection: ITF RC 13/04



Date: 23/07/2013

Surface: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

## RESULT

Recommended

CRITERION	SATISFIED?	COMMENTS
Is the appearance of the court uniform?	Yes	
Is the court free of cracks?	Yes	
Is the court free of gaps between joints?	Yes	
Is the court free of deviations that could cause the ball to deviate significantly from its path on a perfectly level surface?	Yes	
Do the court markings appear to be straight?	Yes	

## Description of court surface construction and condition

Full-court view:



Example of ball mark:



Heavy rain the night before testing resulting in a slightly damp and well consolidated surface and it had received some use prior to testing. The court had been brushed and was in a good uniform condition.

## Additional comments

Pace testing was not undertaken on the taped lines but on the surface adjacent.

## Additional test information

Test ball: ITF-13 High Specification (INA)

# Test Results - Evenness:

## ITF RC 13/04



Date: 23/07/2013

Surface: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

### SURFACE TYPE

Artificial clay (clay-dressed)

### TOLERANCES

Limit (mm): 6  
No. deviations: 2 PPA 4 TPA

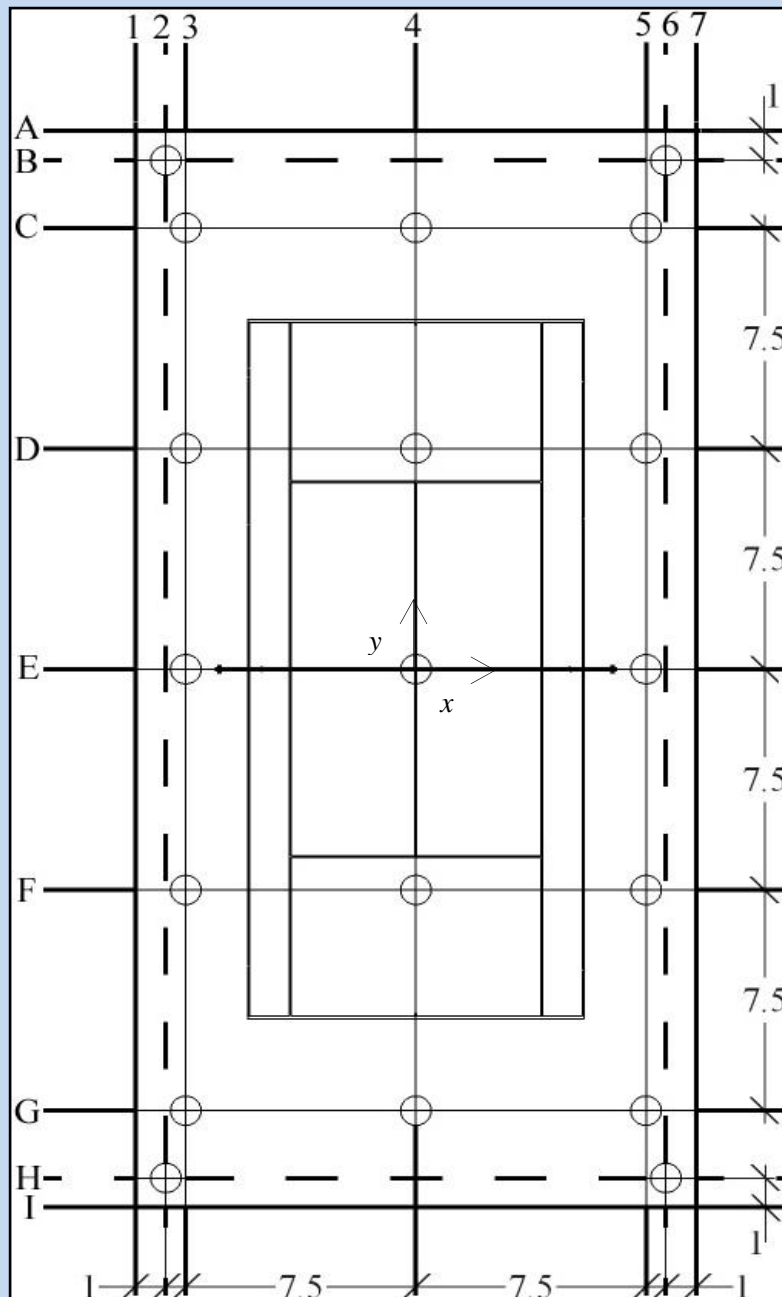
### RESULT

Recommended


X (M)	Y (M)	AREA	DEV. (MM)	DIRECTION
None		#####		

X (M)	Y (M)	AREA	DEV. (MM)	DIRECTION

**Note :** Only deviations that exceed the recommended limit should be entered in the table above (shaded cells).  
The direction of the deviation should be identified as either across the width of the court, 'x', or along its length, 'y'.



# Test Data - Slope & planarity:

ITF RC 13/04 

Date: 23/07/2013

Surface: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

For each grid point on the PPA and for the corners of the TPA type in the staff reading ( $z$ -coordinate) in **millimetres**. Readings on the TPA corners are unlikely to be on the grid, so their  $x$ - and  $y$ -coordinates must be provided in **metres** (grid points B2, B6, H2 & H6).

**Note:** Values can only be entered into shaded cells in the grid below.

	1	2	3	4	5	6	7
A	1 m 1 m			NORTH			1 m 1 m
B		X Y Z	-9.00 18.00 45			X Y Z	9.00 18.00 -44
C			x -7.50 y 15.00 z 38	x 0.00 y 15.00 z -1	x 7.50 y 15.00 z -36		
D			x -7.50 y 7.50 z 36	x 0.00 y 7.50 z 1	x 7.50 y 7.50 z -37		
E			x -7.50 y 0.00 z 38	x 0.00 y 0.00 z 0	x 7.50 y 0.00 z -37		
F			x -7.50 y -7.50 z 38	x 0.00 y -7.50 z 0	x 7.50 y -7.50 z -36		
G			x -7.50 y -15.00 z 37	x 0.00 y -15.00 z 2	x 7.50 y -15.00 z -38		
H	1 m	X Y Z	-9.00 -18.00 44			X Y Z	9.00 -18.00 -46
I	1 m			SOUTH			1 m

# Test Results - Slope & planarity: ITF RC 13/04



Date: 23/07/2013 Surface: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

## SURFACE TYPE

Artificial clay (clay-dressed)

## TOLERANCES

Gradients steeper than 1 : 120 are not recommended.  
 Gradients of less than 1 : 2000 are considered flat.  
 Maximum deviation of  $\pm$  15 mm within the PPA.  
 $\pm$  30 mm within the TPA.

## RESULT

Recommended

## SLOPE

Side-to-side gradient (mean):	Calculated from PPA edges (sides "3" and "5")	1 : 202	downhill in the direction 7 to 1.
End-to-end gradient (mean):	Calculated from PPA edges (ends "C" and "G")	1 : Flat	
Corner-to-corner gradient:	Calculated from PPA corners (C3 to G5)	1 : 441	downhill in the direction G5 to C3.
Corner-to-corner gradient:	Calculated from PPA corners (C5 to G3)	1 : 459	downhill in the direction C5 to G3.

## PLANARITY

Maximum deviation from the plane of the PPA	2 mm	(PPA points)
Maximum deviation from the plane of the PPA	2 mm	(TPA corners)

## LEVELS

(in metres)

	1	2	3	4	5	6	7
A							
B		-0.045				0.044	
C			-0.038	0.001	0.036		
D			-0.036	-0.001	0.037		
E			-0.038	0.000	0.037		
F			-0.038	0.000	0.036		
G			-0.037	-0.002	0.038		
H		-0.044				0.046	
I							

# Test Results - Dimensions:

# ITF RC 13/04



Date: 23/07/2013 Surface: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

Measurements, e.g. "DC", "Dd", etc., refer to Figure 7. Plan view of half-court. In the *ITF Guide to Test Methods for Court Surfaces*.

**RESULT**

Recommended

MEASUREMENT	DESCRIPTION	LOWER LIMIT	UPPER LIMIT	NORTH SIDE	SOUTH SIDE	IN RANGE?
DC	Between doubles sidelines	10.96	10.98	10.960	10.960	Yes
Dd	Doubles to singles sideline (far)	1.37	1.38	1.375	1.375	Yes
Cc	Doubles to singles sideline (near)	1.37	1.38	1.375	1.375	Yes
dJ	Singles sideline to centre mark	4.11	4.12	4.110	4.110	Yes
dc	Between singles sidelines	8.22	8.24	8.220	8.220	Yes
GF	Between singles sidelines	8.22	8.24	8.220	8.220	Yes
GH	Singles sideline to centre serviceline	4.11	4.12	4.110	4.110	Yes
ad	Net to baseline (far)	11.87	11.91	11.900	n/a	Yes
bc	Net to baseline (near)	11.87	11.91	11.900	n/a	Yes
aG	Net to serviceline (far)	6.38	6.42	6.420	n/a	Yes
bF	Net to serviceline (near)	6.38	6.42	6.420	n/a	Yes
dd'	Between baselines (far)	23.75	23.80	23.770	n/a	Yes
cc'	Between baselines (near)	23.75	23.80	23.770	n/a	Yes
GG'	Between servicelines (far)	12.79	12.81	12.800	n/a	Yes
FF'	Between servicelines (near)	12.79	12.81	12.800	n/a	Yes
NN'	Length of net	12.78	12.82	12.780	n/a	Yes
XN	Middle of net to net post	6.38	6.42	6.380	n/a	Yes
DC'	Full-court diagonal (doubles)	26.16	26.21	26.170	n/a	Yes
CD'	Full-court diagonal (doubles)	26.16	26.21	26.170	n/a	Yes
C to backstop	Baseline to backstop	6.40* (5.48)	n/a	6.420	6.420	Yes
C to sidestop	Baseline to sidestop	3.66* (3.05)	n/a	3.690	3.690	Yes

**Note :** All dimensions are given in metres. Values can only be entered into shaded cells in the table above.

\* Applies to international competition. Recommended minimum distance for recreational and club play given in brackets.

# Test Results - Court Pace : ITF RC 13/04



Surface name: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

Surface type: Artificial clay (clay-dressed)

Test date: 23/07/2013

## LOCATION 1:

Mean ball temp: 25°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	27.82	28.19	28.47	29.51	28.04	28.99	28.99	29.23	28.62	<b>28.7</b>	0.2	1.7
$v_{iy}$	7.96	7.51	7.57	8.00	7.35	7.72	7.79	7.57	7.51	<b>7.7</b>	0.1	0.7
$v_{fx}$	16.67	17.49	17.77	17.78	17.36	17.89	17.91	17.94	17.77	<b>17.6</b>	0.1	1.3
$v_{fy}$	6.98	6.82	6.85	7.15	6.67	6.94	6.99	6.59	6.74	<b>6.9</b>	0.1	0.6
<b>COR</b>	0.88	0.91	0.90	0.89	0.91	0.90	0.90	0.87	0.90	<b>0.90</b>	0.00	0.04
<b>COR<sub>T</sub></b>	0.87	0.90	0.90	0.89	0.90	0.89	0.89	0.86	0.89	<b>0.89</b>	0.00	0.04
<b>COF</b>	0.75	0.75	0.74	0.77	0.76	0.76	0.75	0.80	0.76	<b>0.76</b>	0.01	0.06
<b>CPR</b>	16.2	11.5	12.5	10.9	10.1	11.8	12.8	12.1	11.6	<b>12.2</b>	0.6	6.1

## LOCATION 2:

Mean ball temp: 25°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	29.05	29.24	29.23	28.53	28.35	28.88	27.76	29.22	28.87	<b>28.8</b>	0.2	1.5
$v_{iy}$	7.75	7.95	7.96	7.81	7.74	8.05	7.74	8.05	7.95	<b>7.9</b>	0.0	0.3
$v_{fx}$	17.81	17.73	17.96	17.36	17.31	17.32	16.71	17.76	17.61	<b>17.5</b>	0.1	1.3
$v_{fy}$	6.92	6.82	6.92	6.94	6.84	7.34	7.02	7.12	6.96	<b>7.0</b>	0.1	0.5
<b>COR</b>	0.89	0.86	0.87	0.89	0.88	0.91	0.91	0.88	0.88	<b>0.89</b>	0.01	0.05
<b>COR<sub>T</sub></b>	0.89	0.85	0.86	0.88	0.88	0.91	0.90	0.88	0.87	<b>0.88</b>	0.01	0.05
<b>COF</b>	0.77	0.78	0.76	0.76	0.76	0.75	0.75	0.76	0.76	<b>0.76</b>	0.00	0.03
<b>CPR</b>	11.8	15.8	16.3	13.4	14.1	10.5	11.5	14.2	15.6	<b>13.7</b>	0.7	5.7

# Test Results - Court Pace : ITF RC 13/04



Surface name: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

Surface type: Artificial clay (clay-dressed)

Test date: 23/07/2013

## LOCATION 3:

Mean ball temp: 25°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	29.03	28.94	27.71	28.85	28.05	29.38	29.00	28.51	29.35	<b>28.8</b>	0.2	1.7
$v_{iy}$	7.91	7.80	7.57	7.81	7.75	8.12	7.87	7.81	8.23	<b>7.9</b>	0.1	0.7
$v_{fx}$	17.82	17.41	17.05	17.39	17.22	17.81	17.91	17.25	17.84	<b>17.5</b>	0.1	0.9
$v_{fy}$	6.94	6.89	6.88	6.89	6.67	7.04	6.99	6.92	7.05	<b>6.9</b>	0.0	0.4
<b>COR</b>	0.88	0.88	0.91	0.88	0.86	0.87	0.89	0.89	0.86	<b>0.88</b>	0.01	0.05
<b>COR<sub>T</sub></b>	0.87	0.88	0.90	0.88	0.85	0.86	0.88	0.88	0.85	<b>0.87</b>	0.01	0.05
<b>COF</b>	0.75	0.78	0.74	0.78	0.75	0.76	0.75	0.76	0.75	<b>0.76</b>	0.01	0.05
<b>CPR</b>	15.3	11.4	12.3	12.1	18.2	16.0	14.5	13.1	18.6	<b>14.6</b>	0.9	7.2

## LOCATION 4:

Mean ball temp: 25°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	28.87	28.42	28.80	28.32	28.88	28.60	29.64	29.69	27.25	<b>28.7</b>	0.2	2.4
$v_{iy}$	7.94	7.90	8.16	7.80	7.95	7.98	8.27	8.21	7.56	<b>8.0</b>	0.1	0.7
$v_{fx}$	17.24	17.25	17.24	17.37	17.32	17.31	17.82	17.84	16.85	<b>17.4</b>	0.1	1.0
$v_{fy}$	6.99	6.89	7.32	6.78	6.89	6.96	7.21	7.12	6.54	<b>7.0</b>	0.1	0.8
<b>COR</b>	0.88	0.87	0.90	0.87	0.87	0.87	0.87	0.87	0.87	<b>0.87</b>	0.00	0.03
<b>COR<sub>T</sub></b>	0.87	0.87	0.89	0.86	0.86	0.87	0.87	0.86	0.86	<b>0.87</b>	0.00	0.03
<b>COF</b>	0.78	0.76	0.75	0.75	0.78	0.76	0.76	0.77	0.74	<b>0.76</b>	0.00	0.04
<b>CPR</b>	12.5	16.1	13.2	16.9	14.5	16.0	15.3	15.0	18.9	<b>15.4</b>	0.6	6.4



# Test Results - Court Pace : ITF RC 13/04



Surface name: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

Surface type: Artificial clay (clay-dressed)

Test date: 23/07/2013

## LOCATION 5:

Mean ball temp: 26°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	28.66	27.41	28.92	27.76	29.88	29.42	28.45	29.07	28.83	<b>28.7</b>	0.3	2.5
$v_{iy}$	7.89	7.72	7.95	7.86	8.42	8.21	7.95	8.04	8.01	<b>8.0</b>	0.1	0.7
$v_{fx}$	17.24	16.61	17.77	16.71	17.78	17.83	17.36	17.89	17.35	<b>17.4</b>	0.2	1.3
$v_{fy}$	6.94	6.94	7.05	7.02	7.21	7.21	6.94	6.87	6.98	<b>7.0</b>	0.0	0.3
<b>COR</b>	0.88	0.90	0.89	0.89	0.86	0.88	0.87	0.85	0.87	<b>0.88</b>	0.01	0.04
<b>COR<sub>T</sub></b>	0.87	0.89	0.88	0.88	0.85	0.87	0.86	0.85	0.86	<b>0.87</b>	0.01	0.04
<b>COF</b>	0.77	0.74	0.74	0.74	0.77	0.75	0.74	0.75	0.77	<b>0.75</b>	0.00	0.04
<b>CPR</b>	13.9	14.3	15.5	14.6	17.0	16.0	17.4	19.7	15.6	<b>16.0</b>	0.6	5.8

## LOCATION 6:

Mean ball temp: 25°C

$v_{ix}$

$v_{iy}$

$v_{fx}$

$v_{fy}$

**COR**

**COR<sub>T</sub>**

**COF**

**CPR**

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	28.57	29.64	29.44	28.30	29.29	27.85	28.64	29.08	29.63	<b>28.9</b>	0.2	1.8
$v_{iy}$	8.08	8.26	8.17	8.08	8.24	7.96	7.94	8.17	8.35	<b>8.1</b>	0.0	0.4
$v_{fx}$	17.44	17.89	17.78	17.15	17.78	16.65	17.25	17.64	17.81	<b>17.5</b>	0.1	1.2
$v_{fy}$	6.94	7.21	7.15	7.29	7.14	6.97	6.88	7.14	7.12	<b>7.1</b>	0.0	0.4
<b>COR</b>	0.86	0.87	0.88	0.90	0.87	0.88	0.87	0.87	0.85	<b>0.87</b>	0.00	0.05
<b>COR<sub>T</sub></b>	0.85	0.87	0.87	0.90	0.86	0.87	0.86	0.87	0.85	<b>0.87</b>	0.00	0.05
<b>COF</b>	0.74	0.76	0.76	0.73	0.75	0.75	0.77	0.75	0.76	<b>0.75</b>	0.00	0.04
<b>CPR</b>	19.5	15.5	15.0	14.5	17.6	16.0	15.6	16.6	18.1	<b>16.5</b>	0.5	4.9

# Test Results - Court Pace : ITF RC 13/04



Surface name: Red Plus

Test venue: Tennis Club Cureglia

Court: No. 2

Surface type: Artificial clay (clay-dressed)

Test date: 23/07/2013

## LOCATION 7:

Mean ball temp: 25°C

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	28.01	28.57	28.71	29.64	27.18	29.68	29.17	29.58	29.66	<b>28.9</b>	0.3	2.5
$v_{iy}$	7.90	8.08	8.12	8.54	7.87	7.68	7.87	7.97	8.13	<b>8.0</b>	0.1	0.9
$v_{fx}$	16.92	17.36	17.15	17.72	16.28	18.36	17.81	17.78	17.98	<b>17.5</b>	0.2	2.1
$v_{fy}$	6.84	6.94	7.34	7.31	7.02	6.78	6.92	6.87	7.15	<b>7.0</b>	0.1	0.6
<b>COR</b>	0.87	0.86	0.90	0.86	0.89	0.88	0.88	0.86	0.88	<b>0.88</b>	0.01	0.05
<b>COR<sub>T</sub></b>	0.86	0.85	0.90	0.85	0.89	0.88	0.87	0.86	0.87	<b>0.87</b>	0.01	0.05
<b>COF</b>	0.75	0.75	0.75	0.75	0.73	0.78	0.77	0.80	0.76	<b>0.76</b>	0.01	0.06
<b>CPR</b>	17.3	18.9	12.0	18.8	15.4	11.7	13.7	13.6	14.0	<b>15.1</b>	0.9	7.2

## LOCATION 8:

Mean ball temp: 26°C

	Shot 1	Shot 2	Shot 3	Shot 4	Shot 5	Shot 6	Shot 7	Shot 8	Shot 9	Mean	SE	Range
$v_{ix}$	28.87	28.49	29.87	29.88	29.81	29.22	29.65	29.82	29.84	<b>29.5</b>	0.2	1.4
$v_{iy}$	7.88	7.85	8.23	7.94	8.24	7.93	8.02	8.08	8.32	<b>8.1</b>	0.1	0.5
$v_{fx}$	17.81	17.25	18.03	18.04	17.98	17.84	18.12	17.97	17.99	<b>17.9</b>	0.1	0.9
$v_{fy}$	6.94	6.92	7.15	6.87	7.15	6.88	7.15	7.02	7.15	<b>7.0</b>	0.0	0.3
<b>COR</b>	0.88	0.88	0.87	0.87	0.87	0.87	0.89	0.87	0.86	<b>0.87</b>	0.00	0.03
<b>COR<sub>T</sub></b>	0.87	0.87	0.86	0.86	0.86	0.86	0.88	0.86	0.85	<b>0.86</b>	0.00	0.03
<b>COF</b>	0.75	0.76	0.77	0.80	0.77	0.77	0.76	0.78	0.77	<b>0.77</b>	0.01	0.05
<b>CPR</b>	16.1	14.5	15.6	13.1	15.8	15.9	13.1	14.1	17.3	<b>15.1</b>	0.5	4.2

# Test Summary - Court Pace

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# ITF RC 13/04



Surface name: Red Plus

Test venue: Tennis Club Cureglia

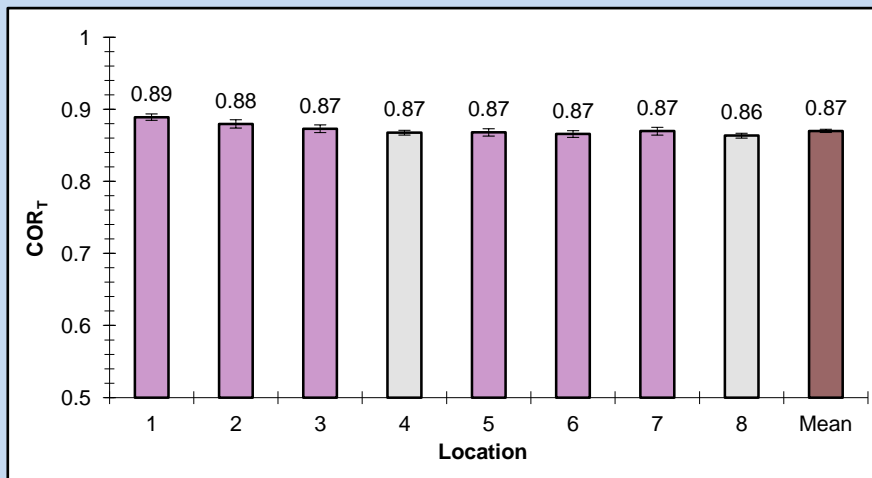
Court:

No. 2

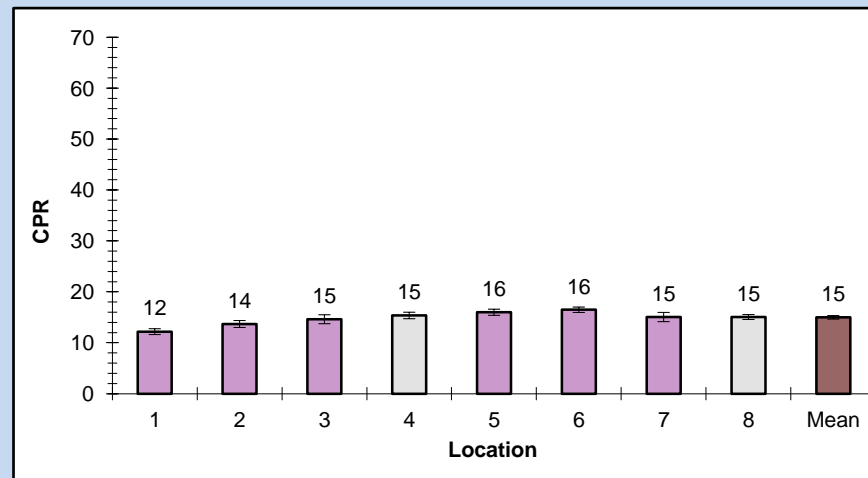
Surface type: Artificial clay (clay-dressed)

Test date: 23/07/2013

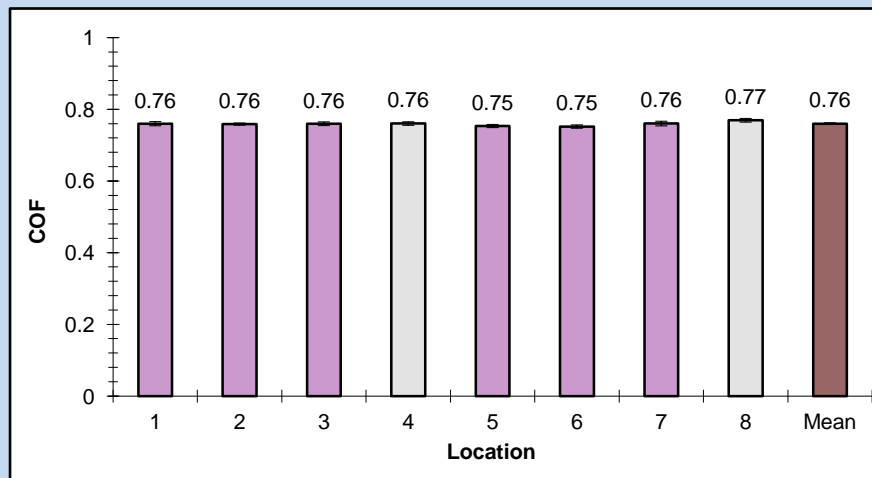
## Coefficient of restitution



## Court pace rating



## Coefficient of friction

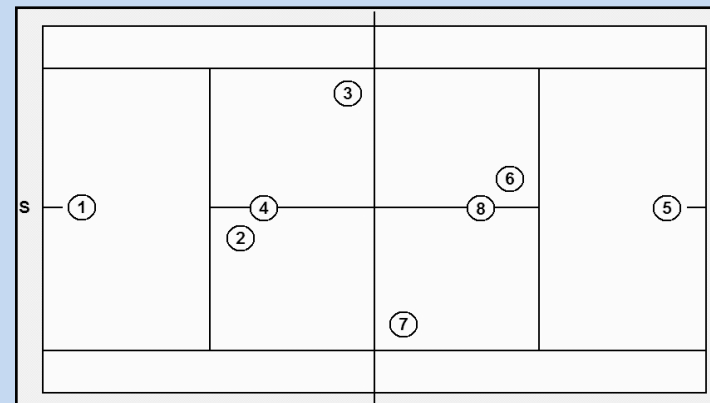


ITF criteria:

COR Low (0 - 0.78) Medium (0.79 - 0.84) High (0.85+)

COF Low (0 - 0.55) Medium (0.56 - 0.70) High (0.71+)

CPR Slow (0 - 29) Medium-slow (30 - 34) Medium (35 - 39) Medium-fast (40 - 44) Fast (45+)



**NOTE:** All mean values for the court **exclude** data for (locations 4 and 8).