



**I.J.F. TATAMI**

# **Regulation**

(Translated from the French original)



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# A 1 - GENERAL

## A 1.1. OBJECT

*The purpose of the International Judo Federation (IJF) is to ensure safety of people practicing judo. This is why IJF makes efforts to impose better quality for TATAMI and to identify clearly the material which complies with the comfort and safety standards.*

*IJF recommends TATAMI which meet the requirements of the European standards CEN, and also special criteria defined by this Regulation. The conformity of the recommended products will be also controlled by an independent laboratory approved by IJF.*

*Each TATAMI that meets these standards will be « APPROVED ». Manufacturer will issue a certificate of equipment conformity at each delivery.*

*These criteria and test methods are detailed in the document "Testing procedure".*

*The tests are realized by an organism recognized by the IJF within the testing laboratory or at the fabrication place.*

## A 1.2 IJF APPROVAL

*Any manufacturer of judo mats can apply for IJF approval.*

*Any holder of this right undertakes to accept any further controls.*

*IJF approval and apposition of the Label "Approved by IJF" on admitted products, will not in no way replace guarantee which is incumbent on manufacturer, distributor or importer.*

*Approved judo mat will be identified with stamp and special mark respecting the IJF specifications.*

## A 1.3 LIMITS

*The use of IJF approval is strictly limited to the products for which it was granted, that means to the products duly defined, issued from the factories duly defined, and fabricated under conditions fixed in this Regulation.*

*In particular, any modification that manufacturer wishes to make in the approved product must be notified to the IJF and according to its evaluation new control should be done.*

## A 1.4 FOLLOW-UP OF THE APROVAL

*IJF will assure administrative follow-up of the approval.*

*All people involved in IJF approval management are kept in professional secrecy.*

### Commitments:

*IJF is in charge of the follow-up of the activities confided to the agencies under this Regulation and of giving advice on:*

*Decisions arising from application of this Regulation, namely in case of interpretation problem or non-accuracy of this Regulation,*

- *Undertaking of more frequent checks,*
- *Decisions concerning withdrawal,*
- *Advertisement and promotion projects.*

## A2 CRITERIA USED BY IJF: APPLICATED STANDARDS

### A 2.1 DEFINITION OF THE PRODUCTS

*«Product» means a set of mats of:*

- *the same dimensions: length, width, thickness,*
- *the same foam characteristics,*
- *the same surface covering,*
- *the same anti-slip base (if any).*

*An extension of IJF approval must be requested in case of modification of the length and/or width and/or surface covering.*

*An extension of IJF approval must be required in case of modification of the nature of the anti-slip base (if any).*

*Test characteristics of the anti-slip base will be done by the approved laboratory.*

*For any other modification, new demand for IJF approval must be done, namely modification of thickness and/or foam characteristics.*

*Technical dossier of the manufacturer must be submitted to the laboratory for any new demand or any modification of the product.*

## A 2.2 STANDARDS

### Applicable standards

Preliminary tests in laboratory: tests for obtaining IJF approval are based on European standard EN 12503-3.

On-site tests: tests for obtaining IJF approval are based on the texts of former French standard cited below:

Training. S 52 – 319 judo mat for trainings and trainings of judo beginners (September 93)

Additional specifications

Anti-slip characteristics of the base

Mat must be tested according to the testing method defined in the document EN 12 503-5 “ Mats – testing method for determination of the anti-slip characteristics of the base)

Values required for anti-slip characteristics of the base:

|                   | Training |
|-------------------|----------|
| Force of friction | >15      |

## Fire regulations

The classification of fire resistance is peculiar to each country. This classification is indicated on the TATAMI according to the regulation of the purchaser's country. If there is no classification of fire resistance, the “NC” notification is indicated. The tests are effectuated by the manufacturer and an organism recognized by the official laboratory mandated by the IJF.

Classification must be in conformity with the regulations of the country where the mat will be used.

This point will be detailed in technical annex, provided by the official laboratory, “The classification of fire resistance”, with obligation of the manufacturer to prove that the product is indeed classified with regard to fire resistance.

## A 3. TERMS OF MARKING AND REFERENCE OF THE ACCEPTED PRODUCTS

### A 3.1 TERMS

Following clauses must be considered as minimum requirements which if they are satisfied, give full freedom to the manufacturers to use the IJF approval under other forms and under other conditions than those described, respecting general principles outlined in this Regulation and respecting graphic chart of the logo available from IJF in color or in black and white.

The marking must be readable, indelible and permanently fixed at least once on each approved judo mat.

This (these) marking(s) must appear in the same visual field:

#### **1/ on the edge of the TATAMI: the manufacturer's logo**

- o -the fabrication date (MM/YY)
- o -the IJF logo (agreement)
- o -the logo of the laboratory having effectuated the tests
- o -Reference N° / Identification
- o -the classification of fire resistance

Dimensions for markings are:

- o Height: 40 mm
- o Length: 50 mm to 100 mm

#### **2/ on the edge or at the underside of the TATAMI:**

Number of the current European Standard: EN 12503-3, number of the type and a statement indicating the upper surface of the mat and the fabrication year

| Manufacturer logo | Fabrication date | IJF logo | Logo of the laboratory | Reference N° / Identification | Classification of fire resistance |
|-------------------|------------------|----------|------------------------|-------------------------------|-----------------------------------|
|-------------------|------------------|----------|------------------------|-------------------------------|-----------------------------------|

### A 3.2 OBLIGATORY INFORMATION SHEET

Information part of the qualification certificate « Approved by IJF » has a form of information sheet with minimum data content indicated below.

Values of characteristics revealed when tested and indicated on the approved mat must coincide with those in the information sheet, taking into account the tolerances and limits of the characteristics imposed by the standard.

Minimum content of the information sheet for a mat is as follows:

- o IJF logo;
- o Logo of the approved laboratory;
- o Commercial mark;
- o Assembling guide and utilization instructions;

*This information sheet is a responsibility of the manufacturer and must accompany products with IJF label at each delivery.*

### **A 3.3 MANAGEMENT AND QUALITY ASSURANCE**

*The holder of IJF approval must respect the requirements.*

*With regard of control of fabrication and general control, to identify aspects of its management related to compliance with the standards and this Regulation and implement specifications from these documents by suitable means.*

*Objectives of these means are:*

- *To obtain conformity of the type,*
- *To verify that conformity was obtained,*
- *To demonstrate that conformity was obtained and checked.*

## **A 4. PROCEDURE**

### **A 4.1 SUBMISSION OF APPLICATION**

*Any application requires prior adherence to CEN standard.*

- *The applicant must be the manufacturer and be able to proof this.*
- *Application should specify place of fabrication and should be done on letterhead of the company.*
- *Application should be addressed to the IJF.*

*Demand of IJF approval should be done by the manufacturer on his letterhead in duplicate, as well as all required documents.*

*Demand corresponds to a product from a unit of fabrication determined and defined by commercial marks, commercial reference and technical characteristics.*

*The entire dossier and different correspondences should be sent to:*

**IJF General Secretary office**  
**21 avenue Gabriel Péri, 94100 Saint-Maur-des-Fossés**  
**France**  
**Email : [gs@ijf.org](mailto:gs@ijf.org)**

*The applicant should :*

- *accept all conditions of the present Regulation, as well as those imposed by the appropriate standards for the products concerned,*
- *commit himself to declare essential modifications of his installations and his quality plan if it exists,*
- *keep denomination (commercial mark and reference) of the fabrication submitted for admission only to the products which comply with the standards,*
- *obligatory put IJF label on admitted products and only on them at the fixed conditions,*
- *fulfill controls and tests stipulated by the present Regulation.*
- *facilitate actions that inspection responsible people have to fulfill according this Regulation.*
- *on request, communicate to the commission and/or to the IJF all printed advertisement which make part of IJF approval.*

*These points are included in the contract with the IJF. The label order is equivalent to the acceptance of the terms and obligations specified in the present document.*

### **A 4.2 ENGAGEMENTS**

*On all printed documents (advertisement or information) issued in accordance with the article 1.3 of the present Regulation, to distinguish clearly details which are confirmed by the test results conducted for IJF approval (certified information), from those which are not.*

### **A 4.3 PRIOR INSPECTION**

*Laboratories chosen for conducting the tests must be approved by the IJF (verification of independence and competence: quality system according to the standard ISO17025 and commitment to participate in the intra laboratories tests)*

#### **Inspection visit**

*The IJF can make sure that the factory meets the criteria of the organization of the production and the quality system of the applicant. The IJF will verify that means of control are in accordance with the requirements of the present Regulation. If necessary, the IJF will effectuate a visit to the factory.*

*In case of extension, maintenance and/or re-admission, there is no additional visit to the factory.*

#### **Technical examination of the products – Tests**

*In order to obtain the agreement, **2 Tatami, of 1mx2m** must be sent for tests to the laboratory in order to verify the conformity with the current norm and the present regulation.*

#### **Examination results**

All inspections and tests are followed by reports (one according to the standard EN 12503-3 and another according to this Regulation).

These reports are addressed to the applicant/holder of the IJF approval by the IJF.

#### **A 4.4 – RENEWAL OF THE IJF APPROVAL**

The approval is granted for a 4 year period. At the end of this period new conformity tests should be carried out.

### **A 5. DECISIONS**

This article covers decisions that can be taken with regard holders and applicants of IJF approval and possible appeal.

#### **A 5.1 NATURE OF DECISIONS**

Consideration of application for IJF approval causes one of the following decisions:

- a) IJF approval with or without observations,
- b) Refusal of IJF approval. Inspections or tests of the admitted products can be followed by one of the following decisions:
- c) Renewal of the IJF approval,
- d) Renewal of the IJF approval with observation,
- e) Warning with undertaking to correct the established non-conformity (-ies) in the fixed period of time,
- f) Warning with increasing number of tests at the charge of the holder,
- g) Suspension of the IJF approval for a fixed period of time,
- h) Withdrawal of the IJF approval

In case of decisions d), e), f),g) and h), costs for additional checks will be at the charge of the holder, regardless of the results.

#### **A 5.2. COMING INTO FORCE**

Decisions are taken and communicated by the IJF  
They are enforceable from the notification of the manufacturer.

#### **A 5.3. PROTECTIVE MESURES IN CASE OF INFRINGEMENT**

In case of serious infringement of the Regulation, as a conservative measure after establishing certain infringement, IJF can apply any sanction indicated in the article 5.1. The decisions taken by the IJF commission will be announced.

#### **A 5.4. CHALLENGE OF DECISION – APPEAL**

In the event if the applicant or the holder of IJF approval challenge the decision which concerns him, he can request a new examination.

### **A 6. CONTROL OF THE CONFORMITY OF THE PRODUCTS ACCEPTED FOR THE LABEL**

#### **A 6.1. TESTS CONDUCTED BY THE HOLDER**

The holder of the IJF approval should carry out regular control on fabrication of the products with IJF approval (fabrication control can be done by a laboratory advised by the IJF)

All modifications related to the ways of fabrication, control and quality system, which can have significant impact on conformity of the products, must be reported in written.

Admitted products must be in conformity with the type which was an admission object, taking into account possible observations concerning IJF approval.

Modifications to the products can be done only with IJF consent and notification of the laboratory which originally carried out the tests. Conditions concerning this agreement should be communicated to the holder of the IJF approval within 15 days from the date of the receiving of the demand.

#### **A 6.2. VERIFICATIONS CARRIED OUT BY IJF**

IJF can carry out on its own or entrust to check what IJF considers necessary basing on information that it possesses.

#### **A 6.3. CONTROL OF FABRICATION**

Regular control of fabrication will be conducted after attribution of IJF approval.

In general, during any visit and anywhere, regardless principal object of his mission, agent responsible for the inspection inquires about the use of the IJF approval and all questions related to application of the present Regulation.

Control of conformity to NF EN 12 503-3 « Judo mat » from one side and requirements of this regulation from another side.

### Inspection of performance every 4 years for the renewal of the approval

Manufacturer should send to the official laboratory 2 TATAMI, of 1m x 2m, corresponding to the TATAMI which he will present on the spot to obtain IJF approval. 2 samples should be in conformity with standard NF EN 12 503-3 and to this Regulation.

The manufacturer is controlled every 4 years at the date of the beginning of the 1 contract or of its renewal, in order to proceed to tests for obtaining the IJF agreement. The tests will be the same for the 1<sup>st</sup> control and the renewal.

### Performance verification (maximum one per year)

Under the request of the IJF, the manufacturer must send 2 TATAMI of 1m x 2m. The TATAMI will be taken from one of the delivery places. The choice of the place will be drawn by the official laboratory. The performance tests will be realized on one mat in the official laboratory.

The manufacturer agrees to send 2 substitution TATAMI.

If the difference of tests results is too important, the IJF can require a more frequent verification.

Manufacturer should present necessary guaranties of fire classification corresponding to this type of product.

### Inspections at the factory (maximum one per year)

Inspections at the factory involve: visit of fabrication installations, possible realization of on-site tests, consultation of the holder of the IJF approval concerning results of the control, and exploitation that was done. Inspections include also examination of possible modifications in control system of the factory which were done after previous visit and their consequences on quality, examination of admitted products and taking samples in order to make tests in independent laboratory indicated in the article 2.2.3.

These visits can be unexpected.

### Controls in commerce

These controls consist of testing one or several products with IJF approval in commerce and examination of the commercial documentation. These controls are carried out at the demand of the IJF.

### Controls in case of complaints

In case of dispute with the consumers, controls can be carried out on the place of utilization of admitted products with taking samples and tests (in this case, the holder is invited to attend the procedure of taking samples and conducting the tests).

The one who will be considered faulty will cover the costs for these tests. The holder of the IJF approval and consumer (erroneous accusation).

### Examination of the results

All inspection visits and tests are followed by inspection and test reports. These reports are sent to the IJF GS if necessary.

These reports are sent to the IJF and the applicant / holder of IJF approval.

## A 6.4. CESSATION OF FABRICATION OR CONTROL

Holder of the IJF approval must immediately declare to IJF all temporary cessation of fabrication or control of admitted products. IJF will forward this information to the independent laboratory which conducted the tests.

In case of abandonment of IJF approval, holder must declare it and specify the period that is needed to sell the products with IJF label remaining at his storehouse. IJF Commission will propose conditions for better selling.

## A 6.5. TRANSFERT FROM THE FABRICATION PLACE

Holder of the IJF approval must inform technical secretariat in beforehand of total or partial, temporary or definitive transfer of the production to another non-declared place of fabrication. Technical secretariat will inform the holder within 15 days about possible tests to be carried out at new place of fabrication, so that the holder can continue to benefit his right to use IJF label.

In case if the transfer is done from one declared place of fabrication to another declared place of fabrication, the holder should just notify the authorities about it.

IJF will forward all necessary information to the independent laboratory which carried out the tests to update its file for the holder.

## A 6.6. CONFORMITY TO THE REQUIEREMENTS OF THIS REGULATION



## Tests

Approved laboratory fulfills the procedure of taking samples and conducting tests according «system of reference for mechanical tests » and informs IJF.

### Procedure of control on the spot

Samples of mats are taken by an agent of the approved laboratory or by the manufacturer amongst a set of 100 at the end of chain of fabrication or at the stock.

An agent of the approved laboratory takes 10 mats.

The procedure is as follows:

- 100 mats are piled up in sets of 20 mats
  - o The control set of 10 mats is composed in uncertain order by taking 2 mats from each pile of 20 mats.
  - o Tests are carried out by an agent of the approved laboratory on the spot.

The threshold of acceptance is:

- Minimum 9 mats must be in conformity;
- The tenth mat can be not in conformity within further limits: it must possess values divergent not more than 5% from the threshold fixed in the standard(s) and additional specifications.

For the admission test or controls, total of tests defined in the standard(s) and additional specification fixed in this Regulation are carried out.

## A 6.7. SUPERVISION BY THE MANUFACTURER & AUTOCONTROL

Manufacturer applying for IJF approval or manufacturer who had obtained such approval commit himself to adapt and to fulfill obligations defined below concerning quality system and procedure of elaboration of the products within this Regulation.

Using IJF approval, the holder of the IJF approval commit himself to maintain the quality of admitted products that he produces and delivers to his clients (conformity of products to the current standards and respect of announced characteristics).

The company should be able to prove existence and efficiency of the quality control system.

### A 6.7. a - Provisions concerning quality system

These provisions must include:

- o application of particular regulations, standards and contract clauses,
- o internal verification of application of control procedures and validity of the results,
- o setting-up of proofs (for example : updating registers)
- o detection of any non-conformity during the fabrication and to prevent recurrence.

**NOTE:** companies provided model of insurance quality defined by the standards ISO 9001, 9002, 9003 and possibly possessing AFAQ certificate or corresponding equivalent to these three references, are supposed to satisfy these exigencies.

### A 6.7.b - Provisions concerning control of the products by the manufacturer

Within of IJF approval, plan of control should include minimum of tests and controls at the manufacturer's initiative.

Means of realization of these controls and tests are within manufacturer's competence at the condition that the prescriptions given bellowed are respected.

They comprise:

- o Controls of primary materials
- o Controls during fabrication including storehouse, transports
- o Control of finished products

For all controls a plan should be established which comprises:

- o Setting-up of the programme for measuring and testing
- o Definition of responsibilities for measuring operations and testing
- o Draw up of reports of measuring and tests
- o Registration, operating of statistics and archive of the results

Frequency of these controls is reserved for estimation of applicant or holder of IJF approval.

Results of the controls should be given at the disposal of controlling agents.

### Controls of primary materials and components

Manufacturer should carry out or to make carried out a regular control of primary materials used for fabrication of products for which the manufacturer is an applicant or holder of IJF approval.

Criteria of acceptance or refusal of primary materials are to be determined by the manufacturer.

### Control during fabrication

Controls during fabrication can be carried out.

Nature and frequency of these controls are to be determined by the manufacturer.

These controls are to be recorded with mention of acceptance criteria and decisions that were taken in case of non-conformity.



### Control of finished products

Controls for finished products should be done in order to assure conformity of the products to the prescription of the corresponding standards.

These controls comprise minimum following points:

- Dimensions,
- Deflection,
- Homogeneity of the foam

Nature and frequency of the controls are to be determined by the manufacturer.

## A 6.8. EXTERNAL SUPERVISION

### A 6.8. A/Types of supervision

#### Inspection visits

Visits are organized by the approved laboratory on criteria indicated in the present regulation.

The objectives of these visits are:

- before the admission of the products to verify existence and efficiency of quality system as well as control of products fabricated by the manufacturer. These are tests of admission.
- To verify later on if the instructions are still respected. These are supervision visits which are random and unforeseen.

#### Tests

##### Tests in laboratory

Manufacturer sends two samples of 2 colors (1mx2m) to the approved laboratory.

Tests of products are carried out according testing methods stated in NF EN 12 503-3 standard "Judo mats": safety requirements and requirements of this regulation.

Technical file (dossier) with fire classification will be examined, according to the user country.

#### On-site tests

Taking samples for the tests from the manufacturer are done by an agent from the chosen laboratory.

Tests are carried out on the spot by the laboratory.

The objectives of these controls are:

- to verify conformity to the certification reference of the products for which an admission or extension request was made;
- to control conformity to the certification reference of the licensed (labeled) products (supervision control which is organized by IJF)

### A 6.8. B /Terms of supervision

#### Inspection visit

As soon as IJF gives its instruction, the approved laboratory makes an inspection visit.

#### Terms

Observations of the agent from the laboratory during his visit are registered in a form that he fills in on the spot.

#### Frequency (maximum 1 per year)

In case of non-conformity to the Regulation which did not cause withdrawal of the right to use IJF label, IJF can prescribe for the fixed period control procedure with more frequent inspection visits.

"Admitted product" means an admitted product, its extensions and/or upholds.

In case of non-conformity to the Regulation which did not cause withdrawal of the right to use IJF label, IJF can prescribe for the fixed period supervision procedure with more frequent controls of the products.

# "Mechanical Testing Framework"

## B –Procedure for laboratory testing

### B 1- TEST OBJECTIVE

The purpose of this regulation is to obtain optimum quality of sport facilities implemented to good technical practice of judo. It specifically targets aspects of security to prevent incidents and accidents that may affect the health of judokas.

Ten parameters will be monitored:

- Dimensions (length, width and thickness)
- Uniformity
- Absorption (maximum deceleration)
- Energy of restitution (coefficient of restitution)
- Friction (coefficient of friction of the base)
- Friction characteristics of the upper surface
- Static Stiffness
- Colour
- Analysis of new technologies

The tests will be conducted in accordance with the requirements of standard NF EN 12503-3 on the judo mat. Additive requirements (see part 5) have to be considered in compliance with this regulation.

## B 2- PROCEDURE

The test itself consists of following parts:

1. Define the dimensions of the TATAMI (paragraph 4.1).
2. Control the uniformity by performing a first set of impacts across the mat with an indenter of 78 mm in diameter and a drop height of 40 cm (paragraph 4.2).
3. Determine the values of two parameters (maximum deceleration and coefficient of restitution) by performing a second set of impacts using two indentors and two heights (paragraph 4.3).
  - Diameter of indentors: 43 mm and 116 mm
  - Height of drop: 20 cm and 60 cm
4. Control the quality of the slip by making a skid test using the pendulum RRL (paragraph 4.5).
5. Determine the top friction (paragraph 4.6).
6. Determine the static stiffness (paragraph 4.4).
7. The friction of the upper surface of the Tatami: it must correspond to a quality of fighters' easy moving (paragraph 4.6).
8. Colour of the Tatami surface with reference to the 2 Pantone colours defined by the IJF.

## B 3- TESTS CONDITIONS

### Conditioning air

As provided in Chapter 6 of the standard EN 12503-4, the temperature condition of the tests is: (21 +/- 3) °C.

## B 4- PERFORMANCES REQUIREMENTS ACCORDING TO EN 12503-3

### B 4.1 Determination of basic characteristics (dimension in cm)

(According to appendix A of standard EN 12503-3)

The length must be of 1 or 2 meters, the width must be of 1 meter and thickness must be 50 mm.  
The sides of the Tatami should be straight cut.

### B 4.2 Uniformity test (in g)

According to Chapter 7.2.1 of standard EN 12503-4

- o 78 mm indenter at 40 cm height

### B 4.3. Peak g and resilience

According to Chapter 7.2.2 of standard EN 12503-4

For each combinaison between indenter diameter and height of fall, the test is carried out in two places on the mat (Point A and Point B).  
The value recorded in the test report is the average value of the two measures.

### B 4.4 Static stiffness

According to standard EN 12503-7

### B 4.5 Base friction characteristics

According to standard EN 12503-5

The frictional value shall be equal or greater than 6.5.

### B 4.6 Top friction characteristics

According to standard EN 12503-6

The coefficient of rotational friction shall be equal to or greater than 1.0.

### B 4.7 Colours

The IJF determined on August 24 2014 that the colors used during the London OG will be the IJF official colours.  
PANTONE reference: RED -1795C, YELLOW – 123C

### B 4.8 Marking

Requirements of marking are in table of test report.

**The mats shall be visibly and permanently marked with\***

## RESULTS GIVEN IN REPORT

| REQUIRED INFORMATION   | PRESENT | NOT PRESENT |
|--|---------|-------------|
| The number of the standard EN 12503-3 and the type number                                    |         |             |
| The name and trademark of the manufacturer, retailer or importer and the year of manufacture |         |             |
| The indication on the upper face of the mat (if not recognizable)                            |         |             |

\* The requirement of marking readability for the whole life of the mat cannot be checked by the laboratory

## B 5- PERFORMANCES REQUIREMENTS FOR THE LABEL

### B 5.1 Determination of dimensional characteristics of TATAMI

(According to appendix A of standard EN 12503-3)

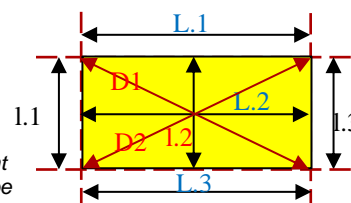
The length must be of 1 or 2 meters, the width must be of 1 meter and thickness must be 50 mm or 60 mm.

The tolerance on the length, the width and the difference between 2 diagonals must be lower than 0.5 cm and the tolerance of the thickness lower than 3%, being 0.15 cm.

The average value of each parameter will be expressed in test report with maximum value of tolerance.

The sides of the Tatami should be straight cut.

Any other size announced by the manufacturer must be made by an official demand to IJF. The testing laboratory is able to participate in the decision of acceptability of this new size (measurement of performances and expert opinion) while maintaining its integrity and independence. It will then be possible to waive this requirement. If the applicant does not reply within a month, the new dimensions will be accepted by default.



### RESULTS GIVEN IN REPORT

|                | Standard dimension                | Mat 1 | Mat2 |
|----------------|-----------------------------------|-------|------|
| Length (mm)    | 100 or 200 ( $\pm 0,5\text{cm}$ ) |       |      |
| Width (mm)     | 100 ( $\pm 0,5\text{cm}$ )        |       |      |
| Thickness (mm) | 50 or 60 ( $\pm 0,15\text{cm}$ )  |       |      |

☐ Sample 1 conform

☐ Sample 1 not conform

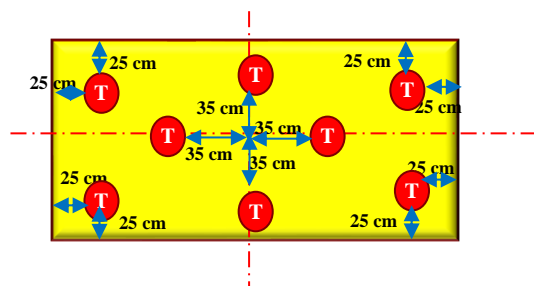
☐ Sample 2 conform

☐ Sample 2 not conform

### B 5.2 Determination of uniformity of TATAMI

Control of uniformity of shock absorption on mat.

#### Requirements:



Fall height: 40 cm  
Indenter diameter: 78 mm.



#### Impacts:

The maximum acceptable difference between each of the 8 points (average value between 3 and 5) and the minimum step of shock absorption variation must be of  $\pm 3$  g compared to total value found.

### RESULTS GIVEN IN REPORT

|            | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 | Test 7 | Test 8 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Values     |        |        |        |        |        |        |        |        |
| Average    | =      |        |        |        |        |        |        |        |
| Difference |        |        |        |        |        |        |        |        |

☐ Sample conform

☐ Sample not conform

### B 5.3. Peak “g” and resilience

According to Chapter 7.2.2 of standard EN 12503-4

The values shall be in accordance with next table:

#### USED EQUIPMENT AND CONDITIONS

| Parameters            | Indenter diameter (mm) |    |     |    |
|-----------------------|------------------------|----|-----|----|
|                       | 43                     |    | 116 |    |
|                       | Fall height (cm)       |    |     |    |
|                       | 20                     | 60 | 20  | 60 |
| Peak deceleration (g) | 30                     | 90 | 40  | 85 |
| Values noted          |                        |    |     |    |
| Resilience (%)        | 30                     | 28 | 32  | 28 |
| Values noted          |                        |    |     |    |



### B 5.4 Determination of mechanical characteristics of TATAMI: shock absorption

For each combinaison between indenter diameter and height of fall, the test is carried out in two places on the mat (Point A and Point B). The value recorded in the test report is the average value of the two measures.

|                           | POINT A |    |     |     | POINT B |    |     |     |
|---------------------------|---------|----|-----|-----|---------|----|-----|-----|
| Test points               | 1       | 2  | 3   | 4   | 5       | 6  | 7   | 8   |
| Fall height (in cm)       | 20      | 60 | 20  | 60  | 20      | 60 | 20  | 60  |
| Indenter diameter (in mm) | 43      | 43 | 116 | 116 | 43      | 43 | 116 | 116 |

#### RESULTS GIVEN IN REPORT

| Circumstances of tests                 |                 | Indenter diameter (mm) |    |     |    |
|--|-----------------|------------------------|----|-----|----|
|  |                 | 43                     |    | 116 |    |
| Measured parameters                    |                 | 20                     | 60 | 20  | 60 |
|  |                 | Fall height (cm)       |    |     |    |
| Peak<br>( $\gamma$ max) $\leq$         | Normative value | 30                     | 60 | 40  | 65 |
|  | Measured value  |                        |    |     |    |
| Deflection<br>( $\epsilon$ max) $\leq$ | Normative value | 26                     | 37 | 19  | 30 |
|  | Measured value  |                        |    |     |    |
| Resilience (%) $\geq$                  | Normative value | 25                     | 21 | 29  | 25 |
|  | Measured value  |                        |    |     |    |

☐

Sample conform

☐

Sample not conform

### B 5.5 Static stiffness

According to standard EN 12503-7

The maximum static stiffness value shall not be greater than 9 mm.

#### RESULTS GIVEN IN REPORT

| Point test          | Test A1 | Test A2 | Test B1 | Test B2 |
|---------------------|---------|---------|---------|---------|
| Measured distortion |         |         |         |         |
| Distorsion average  |         |         |         |         |
| Normative value     | < 9     |         |         |         |
| Comments            |         |         |         |         |

☐

Sample conform

☐

Sample not conform

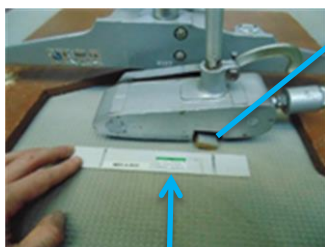
### B 5.6 Determination of the anti-slip characteristics of the TATAMI

#### USED EQUIPMENT AND CONDITIONS

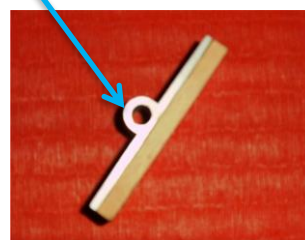
- RRL Pendulum to measure the friction of the anti-slip
- Ruler of Judo to adjust the pendulum RRL



RRL Pendulum



Ruler



Wooden skid

## REQUIREMENTS:

The frictional value shall be equal or greater than 6.5.

Friction force formula: 
$$\beta = \frac{\alpha L \times m}{100}$$

$\beta$  is friction force.

$m$  is mass of 1m<sup>2</sup> of mat in kg.

$\alpha L$  is the lowest mean of resistance when friction measured with pendulum RRL.

## RESULTS GIVEN IN REPORT

|            |                             |
|------------|-----------------------------|
| $\alpha L$ |                             |
| $m$ in kg  |                             |
| $\beta$    |                             |
| Value      | <b><math>\geq 15</math></b> |
| Comments   |                             |



Sample conform



Sample not conform

## B 5.7 Top friction characteristics

According to standard EN 12503-6

## USED EQUIPMENT AND CONDITIONS

### MATERIEL UTILISE ET CONDITIONS

Torque wrench on a fixed support

Ballasted disk

### CONDITIONS

The coefficient of rotational friction shall be equal to or greater than 1.0.

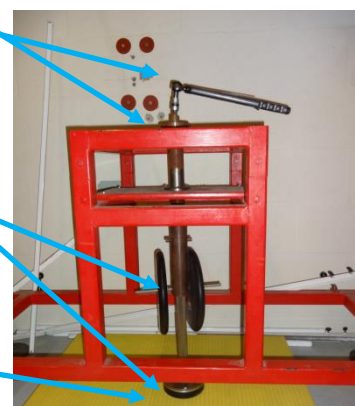
Mean coefficient of rotational friction = 
$$\frac{3T}{wD}$$

- $W$  is the vertical force applied on surface, in Newton.
- $D$  is the diameter of disk in meter
- $T$  is the mean torque in Newton-Meter.

Torque wrench  
Fixed support

Ballasted  
disk

Tatami



## RESULTS GIVEN IN REPORT

|     |         |
|-----|---------|
| $W$ | 451,16N |
| $D$ | 0,15m   |
| $T$ |         |

|                                     |          |
|-------------------------------------|----------|
| Coefficient of friction in rotation |          |
| Normative value                     | $\geq 1$ |
| Comment                             |          |

☐

Sample conform

☐

Sample not conform

## B 5.8 Colours

The IJF determined on August 24 2014 that the colors used during the London OG will be the IJF official colours. Only those colours will be used for the IJF official competitions.

The verification will be made with the reference to the below PANTONE colours:

RED =1795C YELLOW =123C

### RESULTS GIVEN IN REPORT

|                 | ROUGE/RED | JAUNE/YELLOW |
|-----------------|-----------|--------------|
| Measured values |           |              |

☐

Sample conform

☐

Sample not conform

## B 6- New technologies

### Analysis of new materials and technologies and impact on the practice

News technology which may cause problems will be evaluated before the approval.

- Surface covering
- Materials composing the absorbing part of the tatami.
- Anti-slip or system of grappling

**Note:** The tatami should not embarrass the movements, or be dangerous (stuck fingers). The tatami should remain flat and should not curve after use.

## C- Procedure for in situ tests

(Tests based on performances requirements for the label)

### By reasoned decision of the IJF

#### C 1- Choice of batch control

- Minimum stock: 100 mats stacked batch of 20 on a line must be made available to controllers.
- **Number of mat for control: 10**
- Choice of mat: it is done randomly.
- Sense of control: Make the selection from bottom to top and from left to right.

#### C 2- Conditions of control

- Flatness and type of surface for tests: choosing a floor closer to a concrete slab.
- Voltage: should be maximum.
- Temperature: raise the ambient temperature.
- Degree of humidity: raise the relative humidity.
- One test sheet and conformity for each mat.

#### C 3- Determination of dimensional characteristics of TATAMI

Dimensional control

#### REQUIREMENTS:

The sides of the Tatami should be straight cut.

#### Dimensions: normative values

TATAMI of 200cm x 100cm (+/- 0.5 cm including diagonals)

TATAMI of 100cm x 100cm (+/- 0.5 cm and diagonal +/-0.25cm)

#### Thicknesses:

- 50,0 mm or 60 mm (+/- 1,5 mm) → +/- 3 %

Any other size announced by the manufacturer must be made by an official demand to IFJ. The testing laboratory is able to participate in the decision of acceptability of this new size (measurement of performances and expert opinion) while maintaining its integrity and independence. It will then be possible to waive this requirement. If the applicant does not reply within 2 months, the new dimensions will be accepted by default.

#### USED EQUIPMENT

- o A Vernier caliper to measure the thickness of the mat
  - o A tape meter to measure, width and diagonals.
  - o A digital scale to measure the mass of the mat.
- Measurements are made on 10 mats.

#### RESULTS GIVEN IN REPORT

|                 | Measured value | Standard limits | Standard limits | relative difference % |
|-----------------|----------------|-----------------|-----------------|-----------------------|
| Length (cm)     |                |                 |                 |                       |
| Width (cm)      |                |                 |                 |                       |
| Thickness (cm)  |                |                 |                 |                       |
| Diagonal        |                |                 |                 |                       |
| Mass of the mat |                |                 |                 |                       |

☐

Sample conform

☐

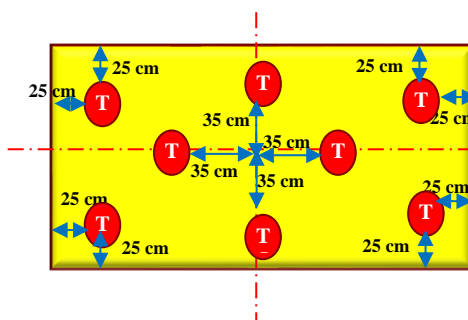
Sample not conform

#### C 4- Determination of uniformity of TATAMI

##### USED EQUIPMENT AND CONDITIONS

Fall height : 40 cm.  
Indentor diameter (mm): 78 mm.

Impacts:



##### REQUIREMENTS:

Minimum step of shock absorption variation: +/- 3 g compared to average value found.  
Measurements are made on 10 mats.

#### RESULTS GIVEN IN REPORT

|            | Test 1 | Test 2 | Test 3 | Test 4 | Test 5 | Test 6 | Test 7 | Test 8 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Values     |        |        |        |        |        |        |        |        |
| Average    |        |        |        |        |        |        |        |        |
| Difference |        |        |        |        |        |        |        |        |

☐

Sample conform

☐

Sample not conform

#### C 5- Determination of mechanical characteristics of TATAMI: shock absorption



## USED EQUIPMENT AND CONDITIONS

Fall height: 20 and 60 cm.

Indenter diameter (mm): 43 and 116 mm.

Indicated values in next table are maximum authorized ones for peak and deflection and minimum authorized one for resilience. Measurements must have precision less than +/- 2. Measurements are made on 10 mats.



## RESULTS GIVEN IN REPORT

| Circumstances of tests                 |                 | Indenter diameter (mm) |    |     |    |
|--|-----------------|------------------------|----|-----|----|
|  |                 | 43                     |    | 116 |    |
| Measured parameters                    |                 | 20                     | 60 | 20  | 60 |
|  |                 | Fall height (cm)       |    |     |    |
| Peak<br>( $\gamma$ max) $\leq$         | Normative value | 30                     | 60 | 40  | 65 |
|  | Measured value  |                        |    |     |    |
| Deflection<br>( $\epsilon$ max) $\leq$ | Normative value | 26                     | 37 | 19  | 30 |
|  | Measured value  |                        |    |     |    |
| Resilience (%) $\geq$                  | Normative value | 25                     | 21 | 29  | 25 |
|  | Measured value  |                        |    |     |    |

☐

Sample conform

☐

Sample not conform

## C 6-Determination of the anti-slip characteristics of the TATAMI

### USED EQUIPMENT AND CONDITIONS

The frictional value shall be greater than 15.

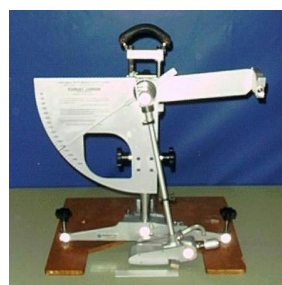
Friction force formula : 
$$\beta = \frac{\alpha L \times m}{100}$$

$\beta$  is friction force.

$m$  is mass of 2m<sup>2</sup> of mat in kg.

$\alpha L$  is the lowest mean of resistance when friction measured with pendulum RRL.

Measurements are made on 10 mats.



## RESULTS GIVEN IN REPORT

| Orientation | Oscillation 1 | Oscillation 2 | Oscillation 3 | Oscillation 4 | Average * |
|-------------|---------------|---------------|---------------|---------------|-----------|
| 1           |               |               |               |               |           |
| 2           |               |               |               |               |           |
| 3           |               |               |               |               |           |

\* Value rounded to the nearest unit

|   |      |
|---|------|
| Mat weight (kg):  |      |
| Coefficient of friction calculated for the sample tested: |      |
| Requirement   | > 15 |

☐

Sample conform

☐

Sample not conform

# D –Tatamis for training

## D 1 DEFINITION

Technical norms of the IJF mats concern all the criteria necessary for the practice in competition of High level. (From National competitions to the World Championships and the Olympic Games. For the Cadets competitions, only competitions of the official international calendar are concerned).

## D2 CRITERIA

To be approved by the IJF, a Tatami for training should only respect mechanical norms of security of the present regulation and propose a system allowing a joint support of the pieces of mat. They are under the responsibility of the organizer who should provide a fixing system.

Compulsory parameters are:

- B.4.8 Marking - to specify the marking :mat for training in compliance with the IJF norms
- B. 5.2 Uniformity –to adapt the principle according to the dimensions of the mat
- B.5.3. Peak “g” and resilience – same
- B 5.4 Shock absorption
- B 5.5 Static stiffness – same
- 

## D 3 PROCEDURE

The procedure is the same as for the IJF mats.

# Guidance for IJF approved TATAMI



## E – Report of manufacturing plant visit

### General

*Identification of control*

*Plant visited*

*Manufacturer*

*People encountered*

### E 1- Arrangements for quality assurance

**MATERIAL CONTROL:** Means for monitoring, measuring and testing and frequency of audits:

**PROCESS CONTROLS:** Means for monitoring, measuring and testing and frequency of audits

**FINISHED PRODUCT INSPECTION:** Means for monitoring, measuring and testing and frequency of audits

**HANDLING, STORAGE AND CONDITIONING:**

### E 2 - Marking and information sheet

### E 3 - General assessments of the auditor

### E 4 - VALIDATION PROCEDURE

1. The manufacturer sends its request to the IJF General Treasurer.
2. Before starting the validation procedure, the IJF General Treasurer verifies solvency of the manufacturer.
3. In case if the manufacturer is not solvent, a letter will be sent to him by the IJF General Treasurer indicating the reasons of refusal.  
In case if the manufacturer is solvent, the IJF General Treasurer informs the President, the General Secretary, the Project Director and responsible Sports Director about it, and sends to the manufacturer documents necessary for the homologation procedure.
4. The manufacturer sends the original application form (including the number of IJF TAG Label they wish to purchase and the choice of the laboratory) to the IJF General Treasurer.
5. The IJF General Treasurer informs the chosen testing laboratory about it.
6. The chosen testing laboratory sends the invoice for the testing fee to the manufacturer. As soon as the manufacturer receives the invoice, he makes the payment by bank transfer to the laboratory.
7. Having made the payment, the manufacturer sends the samples and a copy of the application form to the laboratory as requested in the validation documents.  
The shipping expenses are at the charge of the manufacturer.
8. The laboratory carries out the tests at manufacturer's charge and keeps the samples.
9. Test results are sent to the IJF General Treasurer, with copy of the Project to the IJF.
10. After receiving a favourable opinion, the IJF General Secretary informs the manufacturer about the results. If the TATAMI model passes the test, it can obtain 'IJF Approval'.  
The IJF General Treasurer sends the 'IJF Approved Certificate'.
11. If the TATAMI model is not in conformity to the regulation, the manufacturer will be advised to improve it. The testing fee is not refundable under any circumstances. The manufacturer must pay another testing fee when retrying the test.

# IJF APPROVED LABORATORIES

## CRITT Sport Loisirs

**Contact:** Mr. Sébastien Barroux

**Address:** ZA du Sanital, 21 rue Albert Einstein, 86100 Châtelleraut, **FRANCE**

**Phone:** + 33 5 49 85 73 40, **Fax:** +33 5 49 21 76 20

**E-mail:** [sebastien.barroux@critt-sl.eu](mailto:sebastien.barroux@critt-sl.eu)

## Price list for Judo mat homologation and year monitoring



Grille de prix pour homologation de tapis de judo pour la FIJ tous les 4 ans

*Prices for Judo mat homologation for FIJ every 4 years*

|                              |             |
|------------------------------|-------------|
| Référence règlement :        | DTT 04/2011 |
| <i>Regulation reference:</i> |             |

|   |  | France (€) |         | Autre pays (avec charges) (€)       | Nombre de tapis       |
|---|--|------------|---------|-------------------------------------|-----------------------|
|   |  | HT         | TTC     | <i>Other countries with charges</i> | <i>Number of mats</i> |
| Homologation selon EN12503-3 + règlement                                |  | 1410,00    | 1686,36 | 1762,50                             | 1                     |
| <i>Homologation according to EN12503-3 + regulation</i>                 |  |            |         |                                     |                       |
| Homologation selon règlement  |  | 1260,00    | 1506,96 | 1575,00                             | 1                     |
| <i>Homologation according to regulation</i>                             |  |            |         |                                     |                       |
| Tests sur site<br>(2 personnes)<br><i>In situ tests<br/>(2 persons)</i> | Essais mécaniques                      | 1800,00    | 2152,80 | 2250,00                             | 10                    |
|   | <i>Mechanical tests</i>                |            |         |                                     |                       |
|   | Frais de déplacement (jusqu'à Paris)   | 300,00     | 358,80  | 375,00                              |                       |
|   | <i>Travel fees (to Paris)</i>          |            |         |                                     |                       |
|   | Frais de vie (2 jours : repas + hotel) | 550,00     | 657,80  | 687,50                              |                       |
|   | <i>Life fees</i>                       |            |         |                                     |                       |
|   | Rapport de visite                      | 220,00     | 263,12  | 275,00                              |                       |
|   | <i>Visit report</i>                    |            |         |                                     |                       |
| Total Total   |  | 2870,00    | 3432,52 | 3587,50                             |                       |

Ajouter les frais de déplacement de Paris au site de fabrication pour 2 personnes (Déplacement en avion en classe économique).  
*Add travel fees from Paris to mat manufacture for 2 persons (by plane : Economic class)*

|                                       |                     |  |
|---------------------------------------|---------------------|--|
| Temps homme par personne              | 25€ / heure         | Temps voyage et attente aux aéroports  |
| <i>Person fees (per person)</i>       | <i>25€ per hour</i> | <i>Travel time and wait at airport</i> |
| Masse matériel <i>Material weight</i> | 60 kg               |  |
| Encombrement <i>Dimensions</i>        | 0,61 m3             |  |



Grille de prix pour contrôle annuel de tapis de judo pour la FIJ

*Prices for year monitoring of Judo mat for FIJ*

|                              |             |
|------------------------------|-------------|
| Référence règlement :        | DTT 04/2011 |
| <i>Regulation reference:</i> |             |

|  |                                      | France (€) |         | Autre pays (avec charges) (€)       | Nombre de tapis       |
|--|--------------------------------------|------------|---------|-------------------------------------|-----------------------|
|  |                                      | HT         | TTC     | <i>Other countries with charges</i> | <i>Number of mats</i> |
| Contrôle selon EN12503-3 + règlement   |                                      | 1410,00    | 1686,36 | 1762,50                             | 2                     |
| <i>Homologation according to EN12503-3 + regulation</i>                      |                                      |            |         |                                     |                       |
| Prélèvement<br>Tatami<br>(1 personne)<br><i>Tatami choice<br/>(1 person)</i> | Journée de déplacement               | 500,00     | 598,00  | 625,00                              | 10                    |
|  | <i>Technician day (1)</i>            |            |         |                                     |                       |
|  | Frais de déplacement (jusqu'à Paris) | 300,00     | 358,80  | 375,00                              |                       |
|  | <i>Travel fees (to Paris)</i>        |            |         |                                     |                       |
|  | Frais de vie (1 jour : repas)        | 25,00      | 29,90   | 31,25                               |                       |
|  | <i>Life fees</i>                     |            |         |                                     |                       |
|  | Rapport de visite                    | 100,00     | 119,60  | 125,00                              |                       |
|  | <i>Visit report</i>                  |            |         |                                     |                       |
| Total Total  |                                      | 925,00     | 1106,30 | 1156,25                             |                       |

Ajouter les frais de déplacement de Paris au site de prélèvement pour 1 personne (Déplacement en avion en classe économique).  
*Add travel fees from Paris to mat delivery for 1 person (by plane : Economic class)*

|                                 |                     |  |
|---------------------------------|---------------------|--|
| Temps homme par personne        | 25€ / heure         | Temps voyage et attente aux aéroports  |
| <i>Person fees (per person)</i> | <i>25€ per hour</i> | <i>Travel time and wait at airport</i> |

## GRADUATE SCHOOL OF INFORMATION SCIENCE & ENG.TOKYO INSTITUTE OF TECHNOLOGY

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E-mail : [mikami@mei.titech.ac.jp](mailto:mikami@mei.titech.ac.jp)

### Test Fees of Tatami at Tokyo Tech

| <i>IJF Test</i>                  | <i>Apparatus</i> | <i>Norm code</i>                               | <i>Test item</i>                         | <i>Charge</i>    |
|----------------------------------|------------------|--|--|------------------|
| <b>EN 12503-3 Test</b>           | <b>Tatami</b>    | EN 12503-3 ~ 7                                 | <b>Complete Test</b>                     | <b>€ 2100.-</b>  |
|                                  |                  | EN 12503-3                                     | B 4.1 Dimensions                         | € 100.-          |
|                                  |                  | EN 12503-4                                     | B 4.2 Uniformity (40 impacts)            | € 400.-          |
|                                  |                  | EN 12503-4                                     | B 4.3 Peak g and resilience (40 impacts) | € 400.-          |
|                                  |                  | EN 12503-7                                     | B 4.4 Static stiffness                   | € 200.-          |
|                                  |                  | EN 12503-5                                     | B 4.5 Base friction                      | € 400.-          |
|                                  |                  | EN 12503-6                                     | B 4.6 Top friction                       | € 400.-          |
|                                  |                  | (IJF original norm)                            | B 4.7 Colours                            | € 100.-          |
|                                  |                  | (IJF original norm)                            | B 4.8 Marking                            | € 100.-          |
| <i>IJF Test</i>                  | <i>Apparatus</i> | <i>Norm code</i>                               | <i>Test item</i>                         | <i>Charge</i>    |
| <b>Label Test (Lab Test)</b>     | <b>Tatami</b>    | IJF Regulation (Procedure for laboratory test) | <b>Complete Test</b>                     | <b>€ 2400.-</b>  |
|                                  |                  |  | B 5.1 Dimensions                         | € 100.-          |
|                                  |                  |  | B 5.2 Uniformity (40 impacts)            | € 400.-          |
|                                  |                  |  | B 5.3 Peak g and resilience (40 impacts) | € 400.-          |
|                                  |                  |  | B 5.4 Shock absorption (40 impacts)      | € 400.-          |
|                                  |                  |  | B 5.5 Static stiffness                   | € 200.-          |
|                                  |                  |  | B 5.6 Base friction                      | € 400.-          |
|                                  |                  |  | B 5.7 Top friction                       | € 400.-          |
|                                  |                  |  | B 5.8 Colours                            | € 100.-          |
| <i>IJF Test</i>                  | <i>Apparatus</i> | <i>Norm code</i>                               | <i>Test item</i>                         | <i>Charge</i>    |
| <b>Label Test (In Situ Test)</b> | <b>Tatami</b>    | IJF Regulation (Procedure for in situ test)    | <b>Complete Test</b>                     | <b>€ 13000.-</b> |
|                                  |                  |  | C 3 Dimensions (10 mats)                 | € 1000.-         |
|                                  |                  |  | C 4 Uniformity (10 mats)                 | € 4000.-         |
|                                  |                  |  | C 5 Shock absorption (10 mats)           | € 4000.-         |
|                                  |                  |  | C 6 Base friction (10 mats)              | € 4000.-         |

by Takamasa Mikami, Tokyo Institute of Technology, December, 2015

Note 1) Japanese value added tax (at this moment: 8%) should be added to the fees.

Note 2) In case of "in situ test", all necessary costs for transportation, traveling, staying, etc. should be paid separately.

**GYMLAB****Contact:** Mr. Frizz Carlo ToplakAddress: Albert-Ludwigs-University Freiburg, Department of Sport and Sport Science-GymLab,  
Schwarzwaldstraße 175, D- 79117 Freiburg im Breisgau **GERMANY**

Phone: +(00)49 761 2034554

E-Mail: [gymlab@sport.uni-freiburg.de](mailto:gymlab@sport.uni-freiburg.de)**Test Fees of Tatami at GymLab (Department of Sport and Sport Science  
Albert-Ludwigs-Universität Freiburg)**

| IJF Test                        | Apparatus                                  | Norm Code                           | Test item                   | Charge     |
|---------------------------------|--|-------------------------------------|-----------------------------|------------|
| <b>EN 12503-3<br/>Test</b>      | <b>Tatami<br/>(Judo mats,<br/>Type 12)</b> | EN 12503-3~7                        | <b>Complete Test</b>        | 1.950,00 € |
|                                 |  | EN 12503-3                          | B 4.1 Dimensions            | 50,00 €    |
|                                 |  | EN 12503-4                          | B 4.2 Uniformity            | 400,00 €   |
|                                 |  | EN 12503-4                          | B 4.3 Peak g and resilience | 400,00 €   |
|                                 |  | EN 12503-7                          | B 4.4 Static stiffness      | 200,00 €   |
|                                 |  | EN 12503-5                          | B 4.5 Base friction         | 400,00 €   |
|                                 |  | EN 12503-6                          | B 4.6 Top friction          | 400,00 €   |
|                                 |  | (IJF original norm)                 | B 4.7 Colours               | 50,00 €    |
|                                 |  | (IJF original norm)                 | B 4.8 Marking               | 50,00 €    |
| IJF Test                        | Apparatus                                  | Norm Code                           | Test item                   | Charge     |
| <b>Label Test<br/>(ex situ)</b> | <b>Tatami<br/>(Judo mats,<br/>Type 12)</b> | <b>IJF regulation<br/>(ex situ)</b> | <b>Complete Test</b>        | 2.300,00 € |
|                                 |  |                                     | B 5.1 Dimensions            | 50,00 €    |
|                                 |  |                                     | B 5.2 Uniformity            | 400,00 €   |
|                                 |  |                                     | B 5.3 Peak g and resilience | 400,00 €   |
|                                 |  |                                     | B 5.4 Shock absorption      | 400,00 €   |
|                                 |  |                                     | B 5.5 Static stiffness      | 200,00 €   |
|                                 |  |                                     | B 5.6 Base friction         | 400,00 €   |
|                                 |  |                                     | B 5.7 Top friction          | 400,00 €   |
|                                 |  |                                     | B 5.8 Colours               | 50,00 €    |
| IJF Test                        | Apparatus                                  | Norm Code                           | Test item                   | Charge     |
| <b>Label Test (in situ)</b>     | <b>Tatami<br/>(Judo mats,<br/>Type 12)</b> | <b>IJF regulation<br/>(in situ)</b> | <b>Complete Test</b>        | 3.100,00 € |

*Note 1) In case of "in situ test", all necessary costs for transportation, traveling, staying, etc. have to be paid separately and an according enquiry should be send to GymLab.*