



MAGB
CERTIFICATE OF MALTING COMPETENCE
(CMC)

2010/2011 SYLLABUS

Revised March 2010

CERTIFICATE OF MALTING COMPETENCE 2010/2011

GENERAL ADVICE TO SPONSORS

The Syllabus enclosed indicates both the ground to be covered by the candidate and the three levels of knowledge associated with the subjects. Whilst candidates from outside the production area (i.e. laboratory, commercial etc.) are now accepted for this exam the company must be prepared to commit sufficient time for production exposure. The candidate must be able to demonstrate a good practical knowledge of the processes, equipment and logistics of the site, from barley intake, through production to malt despatch.

The first part of the Examination will be held at the candidate's maltings sometime in Nov/Dec 2010 on a date to be agreed between the candidate and an examiner. The format for this part is:

- a) An initial briefing
- b) A tour of the plant during which the Examiner will ask a number of questions, depth and detail of the reply expected will depend on whether the question is drawn from the Core, Broader or Advanced Group of the syllabus. (See later group explanation)
- c) A debrief during which the Examiner may ask more questions and in which the candidate will be told the result of this part of the examination.

If the candidate gains sufficient marks to pass the first part, they will be invited to attend the second part of the examination, which will be held on 8th March 2011 at Birmingham University. If sufficient numbers warrant it, the examination will also be held at Stirling University. In the morning a practical exam which requires concise written answers will take place, and in the afternoon, a multiple choice written examination will take place.

Sample questions for the practical and written examinations will be available to enrolled candidates from the MAGB website.

The sponsor's role is to provide guidance for, and encouragement of, the candidate. It is recommended that candidates are encouraged to contact CMC holders to learn from their practical experience of the exam. Some coaching in examination technique and time management may also be advisable. Experience of the sponsor's role suggests that it is unwise to nominate the candidate's line manager as sponsor.

An application form, to be completed by the sponsors, is at the end of the CMC Syllabus papers. Once your application has been received, further information, including some sample questions, will be sent to the candidate and his/her sponsor.

In 2004, for the first time, it was possible to extend the examination to a few overseas candidates in North America, as an experiment. This was successful and examiners have agreed to evaluate any requests this year from overseas candidates on a case by case basis. The underlying requirement is that no such undertaking must result in a cost to MAGB. Any such applications will be considered in practical and financial terms by the CMC Examiners Committee.

The closing date for entries is 27th August 2010

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SYLLABUS

INTRODUCTION

The Syllabus requires the candidate to have a broad knowledge of malting both practical and theoretical. However, the depth of knowledge required varies according to the subject matter as follows:-

CORE GROUP

The candidate will be expected to show detailed in depth knowledge of all subjects in this group.

BROADER GROUP

The candidate will be expected to understand, in detail, some of this group's material.

ADVANCED GROUP

The candidate will be expected to have some knowledge of this group's subject matter but not necessarily in detail.

1. **BARLEY**

CORE GROUP

- (a) Identification of common malting varieties
- (b) Sampling techniques
- (c) Hand evaluation and inspection at intake
- (d) Screening
- (e) Drying
- (f) Insect detection and control
- (g) Stores - types of and good housekeeping

BROADER GROUP

- (a) Barley characteristics
- (b) Laboratory and rapid methods of determining; nitrogen, germination capacity, moisture and screenings
- (c) Identifying common insect pests
- (d) Pesticides use of and control
- (e) Use of aeration in barley stores
- (f) Short and long term storage requirements
- (g) Food safety issues associated with barley

ADVANCED GROUP

- (a) Dust extraction plants
- (b) Screen design and performance

- (c) Co-products including pelleting, and associated food safety issues.
- (d) AIC Codes of practice
- (e) Farm assurance schemes, TASCC and FEMAS

2. **MALT (STEEPING)**

CORE GROUP

- (a) Germination energy tests and their interpretation
- (b) Water uptake curves
- (c) Steep programme design
- (d) Selection of barley for specific malts
- (e) Use of CO₂ extraction, and aeration
- (f) Importance of temperature control
- (g) Hand evaluation

BROADER GROUP

- (a) Types of steep
- (b) Steep hygiene

ADVANCED GROUP

- (a) Effluent treatment and costs
- (b) Water sources and quality

3. **MALT (GERMINATION)**

CORE GROUP

- (a) Ambient air conditioning, air flow and its control
- (b) Addition/removal of water
- (c) Use of temperature profiles
- (d) Hand evaluation
- (e) Additives

BROADER GROUP

- (a) Types of germination plant.
- (b) Germination plant hygiene
- (c) Malting losses
- (d) Modification, its meaning and control

ADVANCED GROUP

- (a) Humidification, dew point, rh., psychrometric charts

4. **MALT (KILNING)**

CORE GROUP

- (a) Planning kiln cycles for specific malts
- (b) 'The Break'
- (c) Energy conservation

- (d) Electricity saving
- (e) NDMA
- (f) DMS
- (g) Colour, enzymes, moisture balance

BROADER GROUP

- (a) The three bio-chemical phases
- (b) The two physical phases
- (c) Top and bottom differences
- (d) Types of kilning plant

ADVANCED GROUP

- (a) Humidity and temperature differences
- (b) Combined heat and power (C.H.P.)
- (c) Energy taxes (CCL and EUETS)

5. **MALT (STORAGE AND DESPATCH)**

CORE GROUP

- (a) Deculming
- (b) Sampling
- (c) Malt specifications
- (d) Blending
- (e) Dispatch quality checks

BROADER GROUP

- (a) Awareness of sampling statistics
- (b) Types of delivery - bags, bulk etc.
- (c) Food safety issues associated with malt

ADVANCED GROUP

- (a) Malt assurance schemes (AUKM)

6. **OTHER**

CORE GROUP

- (a) HASAWA. COSHH HACCP
- (b) Safe working practices
- (d) General site pest control principles
- (e) ATEX and DSEAR
- (f) Hygiene Procedures

BROADER GROUP

- (a) Laboratory IOB and EBC methods
- (b) Fuel - choice and cost control
- (c) Other legislation
- (d) Environmental aspects
- (e) Quality systems
- (f) Mechanical handling

(g) Speciality Malts

ADVANCED GROUP

- (a) Finance - an awareness of the financial considerations behind any capital investment
- (b) Costing - an awareness of the essential cost elements in the manufacture of malt.
- (c) Electricity - purchase and cost control
- (d) Automation and computer control
- (e) A general knowledge of the industry

Return by Friday 27th August 2010 to:
The Maltsters' Association of Great Britain 31b Castle Gate Newark Notts NG24 1AZ

VAT Registration No: 243 6241 80

2010/2011 Examination for the Certificate of Malting Competence

Please enrol the following for the above examination

Full name of candidate	Address (including tel/fax numbers)
1.	
2.	
3.	
4.	
5.	
6.	

Name of sponsor for each candidate as numbered above	Address (including tel/fax numbers)
1.	
2.	
3.	
4.	
5.	
6.	

Member Companies will be invoiced £150.00 per candidate (plus VAT), non-member Companies will be invoiced £300.00 per candidate (plus VAT where necessary).

Signed for the Company

Name	Signature	Date