ICBS International Centre for Brewing Science

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Legislative Compliance for Small Brewers

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INSTITUTE OF BREWING & DISTILLING
UK Midland

European Union
European Regional Development Fund

Topics

- HMRC
  - VAT
  - Duty
    - Calculating %ABV
    - Corroborative testing
    - Declaration volume determination
    - Spoilt beer volume
  - Due Diligence & AWRS
- Packaging
  - Labelling
  - Fill levels
  - Allergens
- Risk Assessments
- Proactive withdrawal from trade
- HACCP

VAT

- EX46 (VAT) - VAT due on alcoholic beverages supplied under VAT Act section 18.

- Not even discussing!

Duty - Calculating %ABV

Excise Notice 226: Beer Duty

- You may use any method you wish to measure the strength of beer as long as it produces results that agree with those that would be achieved using the reference method described in section 29.
- If you do not have your own facilities for determining ABV by analysis and you do not add priming sugar, you may use the method (based upon the degree of attenuation in the beer) which is reproduced at section 30.
- If you do add priming's to your beers you may use the method which is reproduced at section 31.

Duty - Calculating %ABV

Excise Notice 226: Beer Duty

- Calculation of % ABV (Sect 30)
  - 'If you have no or minimal laboratory facilities, you may calculate the alcoholic strength of your beer by multiplying the number of degrees by which the beer has attenuated by a factor. In order to make sure that your calculations are accurate, it is essential that the original gravity (OG) be established as soon as possible **after collection and before fermentation commences**, which will normally be within one hour of completion of **filling the fermenting vessel'**

Duty - Calculating %ABV

Excise Notice 226: Beer Duty

- Calculation of % ABV (Sect 30)
  - (OG - PG) × f = a% ABV
  - * OG is the original gravity of the beer
  - * PG is the present gravity of the beer
  - * a is the beer's alcoholic strength
  - * f is the factor connecting the change in gravity to alcoholic strength.
  - The value of 'f' isn't constant because the yield of alcohol isn't constant for all fermentations.

- *Use a suitably calibrated saccharometer adjusted for the temperature of the representative sample.

Duty - Calculating %ABV

(OG - PG)	% ABV	Factor
Up to 6.9	Up to 0.8	0.125
7.0 - 10.4	0.8 - 1.3	0.126
10.5 - 17.2	1.3 - 2.1	0.127
17.3 - 26.1	2.2 - 3.3	0.128
26.2 - 36.0	3.3 - 4.6	0.129
36.1 - 46.5	4.6 - 6.0	0.130
46.6 - 57.1	6.0 - 7.5	0.131
57.2 - 67.9	7.5 - 9.0	0.132
68.0 - 78.8	9.0 - 10.5	0.133
78.9 - 89.7	10.5 - 12.0	0.134
89.8 - 100.7	12.0 - 13.6	0.135

Excise Notice 226: Beer Duty

Duty - Calculating %ABV

Excise Notice 226: Beer Duty

- Distillation analysis:
- Method of determining the strength of beer
- The procedure for distillation analysis is described in Schedule 4, The Beer Regulations 1993

- Send to independent analyst!

Duty - Calculating %ABV

- **Method of determining the strength of beer**

Excise Notice 226: Beer Duty

- 1.
- (1) Subject to sub-paragraph (2) below, the strength of beer shall be determined in the following manner:
- (a) a representative sample is to be taken and, after first being cleared of sediment and gas by filtration in an approved manner, a definite quantity thereof by measure at the temperature of 20 degrees Celsius shall be distilled
- (b) the distillate shall be made up at the temperature of 20 degrees Celsius with distilled water to the original measure of the quantity before distillation
- (c) the strength of the distillate made up in accordance with paragraph (b) above shall be ascertained by determining its density in air at the temperature of 20 degrees Celsius by means of an approved pycnometer used in an approved manner
- (d) the strength of beer shall be taken to be the percentage of alcohol by volume in the table entitled 'Laboratory Alcohol Table' which corresponds to the density determined in accordance with paragraph (c) above except that where the density so determined is between 2 consecutive numbers in the table aforesaid the strength shall be determined by linear interpolation
- (2) Where the result ascertained by the method specified in sub-paragraph (1) above is rendered inaccurate by the presence of substances other than alcohol that method shall be adjusted in such manner as may be approved for the purpose of producing an accurate result

- 2.
- In this Schedule:
- (a) 'approved' means approved by the Commissioners
- (b) 'Laboratory Alcohol Table' means a table of which a copy, signed by the Chairman of the Commissioners and identifying it as relating to the Spirits Regulations 1991, has been deposited in the office of the Queens Remembrance at the Royal Courts of Justice

Duty – Due Diligence

Excise Notice 226: Beer Duty

- **12.4 What are the conditions for using the declared strength?**
- If you wish to use the declared strength for duty purposes, you must be able to demonstrate that you have exercised due diligence in the control of your process to make sure that, on average, the actual ABV of each finished product equates to that which you are declaring on the label etc.

Duty – Due Diligence

Excise Notice 226: Beer Duty

- **12.5 How can I demonstrate that due diligence has been exercised in the control of ABV?**
- You must continuously monitor and record your ABV results, which should normally fall randomly on either side of the target strength. The average of your results should equate closely with the target which must be the declared strength.
- It is recognised that ABV may occasionally vary, but provided appropriate action is taken quickly to return the strength of the beer to within its normal specification, due diligence will have been demonstrated. You must keep records of action taken to maintain product strength within control limits.

Duty – Due Diligence

Excise Notice 226: Beer Duty

- **12.6 Do I have to measure the strength of each product?**
- You must establish the strength of each discrete batch for each of your products. Where beer from one batch is packaged into different container types, for example, cans and bottles, you may combine the results.
- **12.7 What about infrequent or one-off brews?**
- If you can demonstrate to us that based on available information and experience, due care was taken when deciding target ABVs for new and/or infrequently brewed products (and that all decision, actions, etc. were properly recorded), we will accept the label/invoice/delivery note strength for duty purposes

Duty – Corroborative testing

Excise Notice 226: Beer Duty

- Additionally, for these or any other methods not based on laboratory analysis, an independent analyst must test the ABV of **each** of your products, at least annually, to confirm consistency with calculated results. The results of the independent analyses must be held in your business records

- Analyst must either be Public Analyst

  OR

- Conform to BAPS protocol

Duty - Declaration volume determination

Excise Notice 226: Beer Duty

- Duty need not be charged on any undrinkable sediment in cask conditioned beer

- How do you measure it?
- Stillage, tap & vent cask
- At Time X, decant the clear beer
- Measure the sediment volume
- Record for all products
- What is Time X?
- You determine Time X

Duty – Spoilt beer duty reclaim

Excise Notice 226: Beer Duty

You may claim Duty Relief on any beer that has been charged with Duty and has become spoilt or otherwise unfit for use

Any beer which, **in your opinion**, is unfit for sale

Duty – Spoilt beer duty reclaim conditions

Excise Notice 226: Beer Duty

Beer must be in the same container in which it left Duty Suspension

Adulterated or diluted beers must be excluded

Claims must be reduced by any undrinkable sediment

A full audit trail for each constituent part of the claim

A spoilt beer record containing all of the details set out in Notice 226 Paragraph 20.20 must be kept

Due Diligence & AWRS

Excise Notice 226: Beer Duty

The appropriate reasonable care a company exercises when entering into business relations or contracts with other companies, and how it responds in a deliberate reflexive manner to trading risks identified

Who needs to register?

Anyone making or arranging wholesale (i.e. business to business) sales in alcohol at or after the point at which excise duty is payable

But exemption is provided for licensed retailers that make only incidental wholesale sales

Note: Whether or not you have existing approvals/registrations with HMRC (e.g. brewery registration) you still need to register for the scheme if your sales fall in the above category

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Packaging

Packaging – Labelling requirements

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

Legal name of product
All products to display a list of ingredients, in descending order by weight. To be headed by the word 'Ingredients'.
Where the labelling of food places emphasis on the presence or low content of an ingredient it requires an indication of the minimum or maximum % of that ingredient
ALLERGEN INFORMATION Allergenic ingredients to be emphasized in the ingredient lists by using a contrasting font or type e.g. casein (MILK), casein (**milk**)
Best Before Date: Up to 3 months: Day and Month, 3 – 18 months: Month and Year, Over 18 months: Year
All products to be labelled with a recommended storage condition / conditions of use: E.g. Store in a cool dry place / Refrigerate after opening / Use within 3 days of opening
The name or business name and address of the food business operates under whose name the food is being marketed

Packaging – Labelling requirements

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

Does the label meet the legal requirements for labelling in the country of sale?
Mandatory information to printed using a minimum font size (upper to lower edge of lower case letter – x height) Size of largest surface of pack: 80cm2 or greater – 1.2mm height 25 – 80cm2 – 0.9mm <25 cm2 – Exempt from mandatory nutrition declaration Mandatory Information: Name of Food, Ingredients List, Allergen Information, Quantity of ingredients, Net quantity of the food, Use By Date, Special Storage Conditions, Name of Business and Address, Country of Origin or Place of provenance, Instructions for Use, Alcoholic strength, Nutrition Declaration (Optional for beers)
Does the label, recipe and ingredient specs all match?
Is the barcode correct?

Packaging

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

- Ensure that the consumer is provided with a quantity of product that is given on the label
- Implies that the producer or packager must both package the correct quantity and display the amount on the packaging correctly and use agreed units (500mle v 500ml)
- Legislation has to provide a given degree of tolerance where large numbers filled
- The legislation is based on declaration of volume contents on labels
- The legislation is based on declaration of volume contents on labelling and how well on average this is achieved.
- Small pack containers are treated differently to large pack containers

Packaging – Fill levels, Small pack

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

- In the case of small pack beers the legislation makes use of what are called the three Packers' rules.

- These are:
  - On average the actual contents of the package must not be less than the nominal stated volume.
  - No more than 2.5% of the packages may contain a volume that is below a given tolerance limit (T1)
  - No packages will contain a volume which is less than the absolute tolerance limit (T2)

Packaging – Fill levels, Small pack

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

Tolerable negative errors (TNE) and tolerable limits for some common beer pack sizes

Pack Type	Nominal Contents (ml)	TNE (ml)	T_1 (ml) (Max 2.5% < T_1) (i.e. 3% tolerance)	T_2 (ml) (0% acceptable) (i.e. 6% tolerance)
Small bottle	275	9.0	266	257
Large can	440	13.2	427	414
1 litre bottle	1,000	15.0	985	970
3 litre bottle	3,000	45.0	2,955	2,910
50 litre keg	50,000	500	49,500	49,000

Packaging – Fill levels, Small pack

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

During packaging runs confirmatory checks are made by removing real sample containers from the line at suitable intervals and in appropriate numbers and the contents of each measured. This is a sample plan.

Off-line manual checking methods are available for determining fill levels of all containers used for beers. For bottles and cans beer volumes can be measured directly by decanting the liquid into a measuring cylinder, equilibrating to 20°C and recording the volume.

Alternatively, full and empty containers can be weighed and the volume determined by dividing the weight by the density.

Packaging – Fill levels, Large pack

Weights and Measures Act 1985
Weights and Measures (packaged goods) Regulations 2006

In the case of large pack beers such as those in casks the declared volume is used as the basis for duty payment, providing the casks have been filled in accordance with an agreed method.
There must be an approved sampling protocol used to ensure that volumes fall within agreed limits.
The packaging code states that the container has a label bearing the agreed contents and this is used as the sales unit. Within an agreed accounting period the average contents must not be less than the declared content.
In the case of casks the actual content of any unit must be not less than 97% of the declared content.
The declared contents for casks

Container	Volume (litres)
Barrel	163.6
Kilderkin	81.8
Firkin	40.9
Pin	20.4

There are penalties for over-filling casks. Beer volume and actual fill level records must be kept from the sampling protocol.

If the revenue officers consider there has been excessive over-filling an additional duty payment may be exacted.

Packaging - Allergens

Food Information Regulations 2014

http://www.food.gov.uk/sites/default/files/food-allergen-labelling-technical-guidance.pdf
Food Information Regulations 2014

Small pack (<25 l)

'labels must declare any allergens either as a "Contains" statement, or within the list of ingredients'

Large Pack (>25l)

'labels must include the Minimum Durability (Best Before End) of the product'

'if greater than 1.2% ABV, the alcoholic strength and an allergy declaration must be supplied, although this may be on supporting paperwork'

'Brewers should also note that it will be mandatory to declare allergens present in draught beer to the consumer at the point at which an order is made – please note that this requirement is for both sales at retail premises and via "distance selling" i.e. telephone, mail order, online/website'

Packaging - Allergens

Food Information Regulations 2014

Raw material specifications indicate whether or not they contain allergens.
The **usual** allergens found in the brewery are:
GLUTEN from malted barley and FISH from isinglass finings.

If a beer has been brewed and it contains an allergen apart from gluten, a full clean will take place to remove any residual traces before continuing with further production e.g. when brewing MILK stout (LACTOSE addition).

All allergens in the company's products are clearly named on product packaging e.g. on cask and bottle labels.

Brewery staff are aware of the allergens used on site.

They are trained to handle them with care so as to minimise any risks of cross contamination.

Packaging - Allergens

Foods currently classed as allergens
(including products thereof)

Food Information Regulations 2014

Cereals containing gluten (wheat, barley, rye, oats, spelt, kamut or their hybridised strains)	Nuts (almond, hazelnut, walnut, cashew, pecan, Brazil, pistachio, macadamia, Queensland)
Crustaceans	Peanuts
Eggs	Mustard
Fish	Sesame
Soybeans	Sulphur dioxide and sulphites at concentrations of more than 10mg/kg or 10mg/litre, expressed as SO_2
Milk	Lupin
Celery	Molluscs

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Health & Safety

HSE

Risk Assessments – H&S

- www.hse.gov.uk/risk/
- Written procedures required if 5 or more employees
  - Good practice if fewer employees

- H&S covers
  - PPE; manual handling; high temp. & high press. vessels; local exhaust ventilation; working at heights; use of vehicles, lone working, COSHH, confined spaces, display equipment, electricity, first aid, legionella, slips trips & falls;
  - Requires collation of Technical Data and Safety Sheets for chemicals and materials used in processes.

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RA - H&S Example

This is the statement of general policy and arrangements for:		**XXX Brewery**
Overall and final responsibility for health and safety is that of:		**Managing Director**
Day-to-day responsibility for ensuring this policy is put into practice is delegated to:		**Head Brewer**
STATEMENT OF GENERAL POLICY	RESPONSIBILITY OF: Name/Title	ACTION/ARRANGEMENTS
To prevent accidents and cases of work-related ill health and provide adequate control of health and safety risks arising from work activities.	Head Brewer	Relevant risk assessments completed and actions arising out of those assessments implemented (Risk Assessments listed below, Appendix 1) Risk assessments to be reviewed every year, or earlier if working habits or conditions change.
To provide adequate training, including use of external trainers, to ensure employees are competent to do their work.	Head Brewer	Produce induction programme for all staff and subcontractors on necessary health and safety instructions. All staff to be provided with appropriate training and personal protective equipment & record of training maintained. Suitable arrangements to be in place to cover employees engaged in work remote from the main company site.
To engage and consult with employees on day-to-day health and safety conditions and provide advice and supervision on occupational health.	Head Brewer	Staff to be formally consulted at regular health and safety performance review meetings or sooner if required. Staff to be routinely consulted on health and safety matters as they arise.
To implement emergency procedures – evacuation in case of fire or other significant incident.	Senior employee on site	Procedures to deal with emergencies to be documented and implemented Escape routes well signed and kept clear at all times. Evacuation plans are tested from time to time and updated as necessary.
To maintain safe and healthy working conditions, provide and maintain plant, equipment and machinery, and ensure safe storage/use of substances.	Head Brewer	Toilets, washing facilities and drinking water provided. Systems to be put in place for routine inspections and testing of equipment and machinery and for ensuring that action is promptly taken to address any defects. Staff to be trained in safe handling/use of hazardous substances.

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RA - H&S Example

Risk assessment	Date produced	Date of next review
Building Fabric	February 2014	February 2014 + 3 months
Confined Spaces	February 2014	February 2015
COSHH	February 2014	October 2014
Display Screen Equipment	February 2014	July 2014
Electricity	February 2014	January 2015
First Aid Checklist	February 2014	July 2014
High Temperature &/or High Pressure Systems	February 2014	July 2014
Legionella	February 2014	April 2014
Local Exhaust Ventilation	February 2014	January 2015
Manual Handling	February 2014	January 2015
Moving Vehicles	February 2014	April 2014
New & Expectant Mothers	February 2014	February 2014
Occupational Ill Health	February 2014	October 2014
Personal Protective Equipment Provision	February 2014	April 2014 + 3 months
Slips, Trips & Falls	February 2014	October 2014
Working At Height	February 2014	October 2014

Document authorised by Name & Date Signed…… …. Date……

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RA - H&S Example, Slips, trips & falls

What is the hazard?	How may someone be harmed?	What is already being done?	What further action is necessary?	Action by whom?	Action by when?	Completed?
Floor surfaces	Staff may suffer injuries if they slip on spillages, or trip or fall over objects &/or broken surfaces	Plan to repair floor in both units	Repair floor surfaces	Maintenance Manager		
Receiving malt pallets	Slipping whilst moving pallets over ramp		Use FLT to unload / move pallets	All employees		
Poor lighting	Injuries caused by poor lighting conditions	Replace items that are found not to be working	Replace lighting strips that are not working – asap	Maintenance Manager	Ongoing	
Poor housekeeping	Hoses, pumps ladders etc. not broken down and stored tidily after use become a trip hazard	Verbal instructions to tidy them away	Further reiteration required	HB	Ongoing	
			Install signs to reiterate	HB	July 2014	
	Tripping due to rubbish being left in on floors	Remove loose debris on a daily basis	Good housekeeping in offices, production areas and vehicles	HB	Ongoing	
	Pallets removed from last area of use	Keep pallets etc stored in designated areas	Designate specific areas	HB	July 2014	
		'Delivery' boxes eventually removed from reception area	All boxes to be removed the same day and contents stored in designated area	All employees	Daily basis	

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RA - H&S Example, Slips, trips & falls

What is the hazard?	How may someone be harmed?	What is already being done?	What further action is necessary?	Action by whom?	Action by when?	Completed?
Spillages	Slipping due to wet floors	Nothing	Need to minimise occasions when floor is wet Correct footwear to be worn at all times	Production staff	Ongoing	
			Run offs from brewing vessels and FVs to be either 'hard' or 'soft' piped directly to drain	Production staff	Daily basis	
Spillages	Poor grip footware leads to slipping	Staff wear safety footwear with good grip	Staff to inform administration of requirement for new footwear before grip fails	All employees		Yes
	Chemical spillages lead to serious injury	Hose down with water	Purchase container & sand, to be stored next to chemicals, to clear up any spillages	HB		
Trailing electric wires	Trip or slip leading to serious injury	All wires to be kept tidy in office	Nothing			Yes
	Trip or slip leading to serious injury	Any trailing wires within production areas to be highlighted	Warning signs to be erected	HB	July 2014	
			Instruction to ensure wires do not impede traffic	HB	July 2014	

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RA - H&S Example, Slips, trips & falls

Risk	Probability	Impact	Risk Rating	Priority
Trips	2	3	6	
Slips	2	3	6	

Definitions:
Any member of staff, for the purposes of the risk assessments, includes any persons primarily employed as agency, temporary, or work experience staff.

Risk
Assess and identify each risk in turn for the probability of occurrence, using a scale of 1 to 3 (where 1 is not very likely, 2 possible, 3 probable).
Identify what is the likely impact if it does happen i.e. the severity of the effect on operator using a scale of 1 to 3 (where 1 = low impact, 2 = medium impact, 3 = high impact).

Calculate a **Risk Rating**.
The risk rating is calculated using the product of probability and impact, for each risk. Hence a risk with a probability of 3 and an impact of 3 will have a risk analysis rating of 9
Unacceptable risks are those with a rating of 6 or 9.

Document authorised by Name & Date Signed…… Date……

Risk Assessment - Fire

www.gov.uk/workplace-fire-safety-your-responsibilities

Written procedures required if 5 or more employees

- Good practice if fewer employees

Covers

- Fire hazard identification
- Identification of people at risk
- Evaluation, removal or reduction of the risks
- Recording of findings, preparation of emergency plan and provision of training
- Regular review and updating of the fire risk assessment

RA - Fire Example

Daily check completed by: Name Date				
Escape routes	**Y**	**N**	**N/A**	**Comments**
Can all exits be opened immediately and easily?				
Are fire doors clear of obstruction?				
Are escape routes clear?				
Fire warning systems				
In place and undamaged?				
Are torches in place?				
Escape lighting				
Are luminaries and exit signs in good condition and undamaged?				
Is emergency lighting working correctly?				
Firefighting equipment				
Are all fire extinguishers in place?				
Are fire extinguishers clearly visible?				
Are all fire extinguisher stations clearly marked?				

RA - H&S Example

Monthly check completed by: Name Date				
Escape routes	**Y**	**N**	**N/A**	**Comments**
Do all emergency fastening devices work correctly?				
Are escape routes clear and safe?				
Fire warning systems				
Does the alarm system work correctly when tested?				
Does the smoke detector work correctly?				
Did staff and other people hear the fire alarm?				
Are luminaries and exit signs in good condition and undamaged?				
Is emergency lighting working correctly?				
Firefighting equipment				
Are all fire extinguishers in date?				
Are fire extinguishers clearly visible?				
Are all fire extinguisher stations clearly marked?				

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Positive withdrawal of product from trade

Positive withdrawal of product from trade

This business has written guidance for key staff in the event of any incident which may compromise the safety of a product. This includes customer notification; product withdrawal, and product recall procedures.

The law says: Food Businesses are required to withdraw food from the market if the products are not safe. They should also notify their Local Authority or the Food Standards Agency

Positive withdrawal of product from trade

Incident team

Upon the suspicion that there may be a product which needs to be recalled, an incident team should be immediately contacted.
This team should then follow the steps below to determine

a) If there is a problem with a product
b) Should it be recalled
c) How to recall the product
d) How to prevent further occurrence

Issues that may result in full recalls

Food product physically or chemically contaminated
Unsafe material found in products or damage to products
Finished Product not correctly processed, to the extent that it may not be safe
Inaccurate labelling

Positive withdrawal of product from trade

Notification of the incident
Start a log, detail everything

Proposed action
A food business is required by law to withdraw food from the market if the products are not safe.
They should also notify the Local Authority in which the food business is based.
Incidents can also be reported to the Food Standards agency

Recall required
Draft communication for LA/FSA/Customers/Consumers & whom else?

Post incident
Review findings and outcome
Organise safe secure and legitimate disposal

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Hazard Analysis and Critical Control Point plan
HACCP

HACCP

Hazard Analysis at Critical Control Points (HACCP) is a legal requirement

It is a system that helps food business operators look at how they handle food and introduces procedures to make sure what they produce is safe to consume

What is required?

- Conduct a hazard analysis
- Identify CCPs
- Establish critical limits
- Establish monitoring
- Establish corrective actions
- Define documentation and records
- Implement and verify

Questions?