



## DUNKEL | 20 LITER

### LAGER



A Dunkel with malty taste and notes of dark bread, dried fruits, chocolate and citrus.

#### KIT CONTENT:

##### MALT:

2.00 kg Vienna Malt  
1.00 kg Light Munich  
0.50 kg Munich Dark  
0.50 kg Maris Otter Ale Malt  
0.25 kg Chocolate Dark Malt  
0.20 kg Naked Oat Malt  
0.20 kg Wheat Malt

**HOPS:** 10 g Magnum, 20 g Tettnanger, 20 g Tettnanger

**YEAST:** 2 pcs Saflager S-189

**EXPECTED OG:** 1.050 | **EXPECTED FG:** 1.010

**EXPECTED ABV:** 5.43%

**FERMENTATION TEMPERATURE:** 12°C

**MASH TEMP:** 69°C

**BOIL TIME:** 60 min

**HOP ADDITION TIMES:** Magnum 10 g - First Wort Hop  
Tettnanger 20 g - 20 min  
Tettnanger 20 g - 0 min

**BEER XML FILE:** If you use an app like Brewfather you can download a XML file for this recipe under the product on [maltmagnus.se](http://maltmagnus.se)

#### IF YOU HAVE BREWED BEFORE:

This is basic step-by-step instructions mainly for beginners. If you have brewed before, just use your brewing equipment as usual. You find mash temperatures and hop additions above.

#### YOU NEED:

- Cleaner and sanitizer
- Kettle or brewing equipment to boil 25-29 liters of wort.
- Kettle for heating sparge water.
- All Grain brewing equipment.
- Fermentation equipment.
- Bottling or kegging equipment.

Equipment and ingredients can be found at [www.maltmagnus.se](http://www.maltmagnus.se)

### BREW DAY

1. Start with making sure everything in the kit is included.
2. Read through the instructions!
3. Wash and clean the brewing equipment. Do not use the same equipment used while cooking or washing up.
4. Sterilize the equipment that will be in contact with the wort after chilling. Follow the dosage instructions on your sanitizer. Your beer can get infected if this step is not done correct.

### STEP 1

1. Fill up with water to the false bottom if you have one before measuring 3 liters per 1 kg malt.
2. Heat the water to 69°C.

## STEP 2

**MASH IN** - Add the crushed malt while stirring to avoid lumps. Mash at 69°C for 60 minutes.

## STEP 3

**MASH OUT** - Rise the temperature while stirring to 76°C for about 10 minutes.

## STEP 4

**SPARGE** - Prepare water in your hot liquor tank / kettle to a temperature of 80°C.

Rinse the malt gently with the hot water until you reach a total volume of 23-25 liters in your boil kettle.

## STEP 5

**BOIL** - Open the bag labeled **10 g Magnum**. Pour the content into the kettle. This is called "First Wort Hop".

Start heating until you reach a boil.

The wort shall boil for 60 minutes. Do not use lid!

Boil for 40 minutes.

Open the bag labeled **20 g Tettnanger**. Pour the content into the kettle. Boil for 20 minutes.

Turn off the heat / Flame out!

Open the bag labeled **20 g Tettnanger**. Pour the content into the kettle.

## STEP 6

**COOLING** – Cool the wort as rapidly as possible to around 12°C. Use spiral cooler or other cooling equipment. If you do not have any, put the fermentation bucket in a cool water bath.

**NOTE! Do not use any un-sanitized equipment or hands in the wort at this point!**

Take a sample and measure the Oeschle value with a hydrometer and write down the result.

This is the OG value.

## STEP 7

**FERMENTATION** – Open up the yeast package with a sterilized scissors and pour it into the cooled wort.

Fill the airlock and put it into the lid of the fermentation bucket.

Place the bucket on a dark spot keeping a temperature of 12°C.

Leave for 14—28 days. When the fermentation is done take a wort sample and measure it with your hydrometer. This is the FG.

**Calculation ABV:**  $(OG-FG) \times 131,25 = ABV$

## BOTTLING

### BOTTLING YOUR BEER:

1. Wash and sanitize the bottles. Put the caps in a bowl with sanitizer.
2. We recommend **Carbonation Drops**. Follow the dosage instructions on the package. You can also use regular table sugar: 2-3 grams per 33 cl bottle.
3. Fill the bottles with beer and leave a airpocket at the top. Cap it and place it in room temperature for at least one week. Open a bottle and test the carbonation levels. If you think its enough, chill for a week or two. Enjoy!