

## American Pils FM31

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **33**
- SRM **4.1**
- Style **Bohemian Pilsener**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **28.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.9 liter(s)**
- Total mash volume **22.6 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **28.2 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński  | 5 kg (88.7%)   | 80 %  | 4   |
| Grain | Weyermann - Carapils | 0.5 kg (8.9%)  | 78 %  | 4   |
| Grain | Strzegom Wiedeński   | 0.14 kg (2.5%) | 79 %  | 10  |

### Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 20 g   | 60 min | 15.7 %     |
| Aroma (end of boil) | Galaxy                 | 100 g  | 0 min  | 13.6 %     |

### Yeasts

| Name                 | Type  | Form   | Amount | Laboratory       |
|----------------------|-------|--------|--------|------------------|
| FM31 Bawarska Dolina | Lager | Liquid | 30 ml  | Fermentum Mobile |
| Starter 1 l 10 Blg   |       |        |        |                  |