

Amarillo stout

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **39**
- SRM **49**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **4 %**
- Size with trub loss **21.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **16.9 liter(s)**
- Total mash volume **23.1 liter(s)**

Steps

- Temp **70 C**, Time **1 min**
- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **16.9 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **70C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **23.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|------|
| Grain | Briess - Pale Ale Malt | 5 kg (80%) | 80 % | 7 |
| Grain | Jęczmień palony | 0.5 kg (8%) | 55 % | 985 |
| Grain | Strzegom Czekoladowy 1200 | 0.2 kg (3.2%) | 68 % | 1202 |
| Grain | Carafa II | 0.4 kg (6.4%) | 70 % | 812 |
| Grain | Caraaroma | 0.15 kg (2.4%) | 78 % | 400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Magnum | 20 g | 60 min | 13.5 % |
| Boil | Amarillo | 10 g | 30 min | 7.5 % |
| Boil | Amarillo | 10 g | 20 min | 7.5 % |
| Boil | Amarillo | 10 g | 10 min | 7.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------|-----|-------|-------|-----------|
| us-05 | Ale | Slant | 50 ml | fermentis |
|-------|-----|-------|-------|-----------|