

# Mass Effect

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **36**
- SRM **4.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **10 %**
- Size with trub loss **31.2 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **42.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **28 liter(s)**

## Steps

- Temp **51 C**, Time **30 min**
- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**
- Temp **77 C**, Time **15 min**

## Mash step by step

- Heat up **20 liter(s)** of strike water to **57.2C**
- Add grains
- Keep mash **30 min** at **51C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **15 min** at **77C**
- Sparge using **30.1 liter(s)** of **76C** water or to achieve **42.1 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount       | Yield | EBC |
|-------|---------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński | 5 kg (62.5%) | 80 %  | 4   |
| Grain | Płatki owsiane      | 2 kg (25%)   | 60 %  | 3   |
| Grain | Monachijski         | 1 kg (12.5%) | 80 %  | 16  |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Citra                  | 5 g    | 30 min   | 12 %       |
| Whirlpool           | Citra                  | 5 g    | 60 min   | 12 %       |
| Dry Hop             | Citra                  | 50 g   | 5 day(s) | 12 %       |
| Boil                | Simcoe                 | 5 g    | 30 min   | 13.2 %     |
| Whirlpool           | Simcoe                 | 5 g    | 60 min   | 13.2 %     |
| Dry Hop             | Simcoe                 | 50 g   | 5 day(s) | 13.2 %     |
| Boil                | Amarillo               | 5 g    | 30 min   | 9.5 %      |
| Aroma (end of boil) | Amarillo               | 5 g    | 60 min   | 9.5 %      |
| Boil                | Columbus/Tomahawk/Zeus | 5 g    | 30 min   | 15.5 %     |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 5 g    | 30 min   | 15.5 %     |

|                     |                        |      |          |        |
|---------------------|------------------------|------|----------|--------|
| Whirlpool           | Columbus/Tomahawk/Zeus | 5 g  | 60 min   | 15.5 % |
| Dry Hop             | Columbus/Tomahawk/Zeus | 85 g | 5 day(s) | 15.5 % |
| Boil                | Magnum                 | 5 g  | 15 min   | 13.5 % |
| Aroma (end of boil) | Magnum                 | 5 g  | 10 min   | 13.5 % |
| Whirlpool           | Magnum                 | 5 g  | 60 min   | 13.5 % |
| Dry Hop             | Magnum                 | 85 g | 5 day(s) | 13.5 % |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 23 g   | Fermentis  |