

## MANOSÉ Health and Beauty Research Center

### List of Service Items

No.	Service	Test duration (days)
<b>• Chemical analysis</b>		
1.	Qualitative and quantitative analysis of various compounds (anthraquinone, anthocyanin, flavonoid, carotenoid, tannin, xanthone, curcumin, collagen, reduced glutathione, sildenafil, etc.)	30
2.	SPF values analysis by spectrophotometry	30
3.	Phytochemical analysis (alkaloids, anthraquinone, glycoside, xanthone, carotenoid, tannin, flavonoid, triterpene and steroid)	15
4.	Total phenolic contents analysis by Folin–Ciocalteu phenol colorimetric assay	30
5.	Total flavonoid contents analysis by aluminium chloride colorimetric assay	30
6.	Total tannin contents analysis by Follin–Ciocalteu phenol colorimetric assay	30
7.	Total saponin contents analysis by vanillin colorimetric assay	30
8.	Total protein contents analysis by UV–spectrophotometry	30
9.	Refractive index analysis	30
10.	Loss on drying analysis	30
11.	pH value measurement	5
12.	Viscosity measurement	15
13.	Melting point measurement	15
14.	Shelf life estimation of a cosmetic product	90
<b>• In vitro biological activity</b>		
15.	Anti-oxidative activities	
	– DPPH radical scavenging activity	30
	– Metal chelating activity by ferrous iron–ferrozine complex method	30
	– Lipid peroxidation inhibition activity by ferric iron–thiocyanate complex method	30
	– Nitric oxide radical scavenging activity	30
16.	Tyrosinase inhibition activity by the dopachrome method / whitening activity	30

No.	Service	Test duration (days)
17.	Elastase inhibition activity / Anti-wrinkle	30
18.	Collagenase inhibition activity / Anti-wrinkle	30
19.	Hyaluronidase inhibition activity / Anti-wrinkle	30
20.	Lipase inhibition activity / weight control	30
21.	$\alpha$ -glucosidase inhibition activity / weight control	30
22.	$\alpha$ -amylase inhibition activity / weight control	30
23.	Acetylcholinesterase stimulation activity (Botox-like activity)	30
24.	Phosphodiesterase type 5 inhibition activity : (Erectile dysfunction)	
	- % inhibition	30
	- IC <sub>50</sub>	30
25.	<i>In vitro</i> anti-inflammatory activity	15-30
26.	Immunomodulatory activity by NBT method	15-30
27.	Anti-proliferative activity in cancer cell lines by SRB method / Anti-cancer	30-60
28.	Cytotoxicity in skin fibroblasts by SRB method	30-60
29.	Estrogenic effect in cell culture	30-60
30.	Skin fibroblast proliferation activity	30-60
31.	Wound healing activity in skin fibroblasts	40-60
32.	5 $\alpha$ -reductase inhibition activity in DU-145 / hair growth	30-60
33.	Melanogenesis induction/inhibition activity in B16F10 / whitening activity and darkening activity	45
34.	Tyrosinase induction / inhibition activity in B16F10 / whitening and darkening activity	45
35.	Matrix metalloproteinase-2 induction/inhibition activity by zymography in skin fibroblasts / Scar reduction or Anti-aging	30-60
36.	Anti-aging activity by telomerase stimulation in HeLa cell line	30-60
37.	Apoptosis induction activity by the AO/EB method in various cancer cell lines	30-60
38.	Apoptosis induction activity by the flow cytometry in various cancer cell lines	30-60
39.	Anti-cancer mechanism by the flow cytometry in various cancer cell lines	30-60
40.	Anti-inflammatory activity in RAW 264.7	30

No.	Service	Test duration (days)
<p><b>*test Nos. 31–39 should determine cytotoxicity test in order to select the concentration which gives no toxicity to cell. If the customers specify the concentration, it will not be guaranteed that the specified concentration is not toxic to cells.</b></p>		
41.	Anti-microbial activity by the disc diffusion method	30
42.	Determination of minimum inhibitory concentrations (MIC) by broth dilution technique	30
43.	Determination of minimum bactericidal concentrations (MBC)	30
<p><b>*test Nos. 41–43 : Types of microorganism : <i>Staphylococcus aureus</i>, <i>Streptococcus mutans</i>, <i>Candida albicans</i>, <i>Malassezia furfur</i>, <i>Propionibacterium acnes</i>, etc.</b></p>		
44.	Determination of microbial contamination in extracts and products such as cosmetics by the plate count method	30
<p><b>• In vivo biological activity test</b></p>		
45.	Anti-inflammatory activity by ear edema evaluation in rats	30
46.	Hypoglycemic effect on the induced diabetic rats	30–60
47.	Anti-hypertension by tail cuff method in rats	30–60
48.	Relaxation effects from endorphin or epinephrine or cortisol excretion in rats	90
49.	Anti-cancer activity by human tumor xenograft in nude mice	90
50.	Anti-impotence activity in rats	90
51.	Estrogenic effect in rats	30–60
52.	Anti-lipidemic activity in rats	60
53.	Acute toxicity in rats	60
54.	Sub-acute toxicity in rats	90
55.	Sub-chronic toxicity in rats	150
<p><b>• Tests in human volunteers (10 volunteers)</b></p>		
56.	Water resistance of the sunscreen product	30
57.	Measurement of oils on skin	45–60
58.	Skin irritation evaluation	30
59.	Skin whitening effect	60

No.	Service	Test duration (days)
60.	Skin hydration induction activity	60
61.	Skin elasticity induction activity	60
62.	Skin greasiness reduction activity	60
63.	Transepidermal water loss (TEWL) reduction activity	60
64.	Skin wrinkle reduction activity (visioscan)	60
<b>• Other Tests and Analysis Services</b>		
65.	Drying of the extract by a rotary evaporator	7
66.	Drying of the extract by a freeze dryer	15
67.	Skin penetration by Franz diffusion cell	60
<b>• Products of Manose</b>		<b>price / pack</b>
68.	Machosé-M Capsule	1,200 bath
69.	Citronella Grass Lotion for Mosquito Repellent	120 bath
70.	Manose Mouth Spray : Mouth spray for bad breath and refreshment	120 bath
71.	Manose Massage Cream for skin nourishing and relaxing	390 bath

Note : Work on requested

1. Other qualitative and quantitative analysis including bioactivities can be done to order.
2. Development of Research Proposals / Consultation and research troubleshooting.

Updated : 18 December 2019